# THE CRITICAL REVIEW.

## For NOVEMBER, 1788.

*Philoſophical Tranſactions of the Royal Society of London. Vol. LXXVIII. For the Year* 1788. *Part I.* 4*to.* 7*s.* 6*d.* L. Davis.

ONE of our firſt exertions, in conſequence of our eſcape from a load of unpubliſhed articles, ſhould be evinced by an early attention to national works; we therefore take up with great pleaſure the firſt part of the Philoſophical Tranſactions*, not only becauſe it is the work of our own country, but becauſe it appears important.

Art. I. Of the Method of manifeſting the Preſence, and aſcertaining the Quality of ſmall Quantities of Natural or Artificial Electricity. By Mr. Tiberius Cavallo, F. R. S.—This is a lecture delivered in purſuance of the will of the late Mr. Baker. Mr. Cavallo gives an account of the inſtruments hitherto employed to render ſmall quantities of electricity ſenſible, particularly the electrometer, M. Volta's condenſer of electricity, and Mr. Bennet's doubler. The laſt, he obſerves, is not quite accurate in its reſults: for ſince all bodies have a ſlight degree of electricity above their natural ſhare, ariſing from the very ſlow eſcape of the laſt portions of the fluid, the inſtrument doubles this quantity as well as the electricity of the atmoſphere. In all his trials he could find no way of avoiding this inconvenience, and he allows the ingenuity of the contrivance, though he thinks it ſometimes gives incorrect notions of the quantity and the kind of electricity. The electrical fluid ſeems to eſcape in times greater than the inverſe duplicate proportion of the denſities of the electricity remaining in the electrometer. Every body therefore may be ſuppoſed not accurately in that ſtate which would reſult from an equable diſtribution of the electrical fluid. Mr. Cavallo deſcribes the beſt means of judging of the quantity of the fluid, either by a good electrometer, or an inſtrument reſembling M. Volta's condenſer, and concludes with a new explanation of the production of electricity by friction, which depends on the opinion that ſome electricity, above

* This Article has been unavoidably delayed.

what it would have from an equable diſtribution, remains in every body; and on the principle of the capacity of bodies ſo holding the electrical fluid, being increaſed by the proximity of other bodies in certain circumſtances. The particular explanation we cannot abridge, and, indeed, it does not appear ſufficiently probable to induce us to tranſcribe it at length.

Art. II. The Croonian Lecture on Muſcular Motion. By George Fordyce, M. D. F. R. S.—This lecture furniſhes nothing new: the motion is attributed to the increaſe of that attraction which Dr. Fordyce calls the attraction of life, and other phyſiologiſts tone or tenſion. Our author ſuppoſes that the nerves are not employed in communicating impreſſions, becauſe they are defended by the ſcarf-ſkin, and by mucus: but we think that, in this way, he would prove that a body acts where it is not. The ſenſation evidently ſhows that an impreſſion is made; and Dr. Fordyce, in his inſtances, confounds the vis inſita of the muſcle with the vis animalis, or the power by which it neceſſarily contracts in conſequence of its organization, on the application of a ſtimulus, with that action which is influenced by the mind. The diſcoveries in phyſiology, for a time, our author thinks, retarded the progreſs of medicine; but, with due ſubmiſſion, we ſuſpect that he miſtakes the ſource of the good effects of topical bleedings and irritating applications.

Art. III. An Account of a Maſs of Native Iron found in South America. By Don Michael Rubin de Celis.—This memoir, which is in the Spaniſh language, is tranſlated at the end. The obſervation is very curious, and the maſs of iron was evidently of volcanic origin. It was found in lat. 27 deg. 28 min. But the following fact is ſtill more remarkable.

'At a little depth in the earth are found ſtones of quartz, of a beautiful red colour, which the honey-gatherers make uſe of as flints to light their fires. They had formerly carried ſome of them away, on account of their peculiar beauty, being ſpotted and ſtudded as it were with gold. One of theſe, that weighed about an ounce, came into the hands of the governor of Santiago del Eſtero, who told me, that he ground it, and ſhewed me more than a drachm of gold that he had extracted from it.'

Art. IV. Frigorific Experiments on the mechanical Expanſion of Air. By Eraſmus Darwin, M. D. F. R. S.—Dr. Darwin ſuppoſes that rarefied air, even if the rarefaction occurs after previous condenſation, ſo that in reality the air at laſt is not more rare than that which ſurrounds it; yet if this rarefaction is ſudden, that it has a power of attracting heat from the ſurrounding bodies, while condenſation, by ſqueezing out the heat, as may be imagined, ſets it at liberty in a ſenſible form. Theſe poſitions are ſupported by the ſinking of the thermometer in exhauſting the receiver of an air-pump, and the conſequent cloud in the receiver; the

the falling of the mercury, and the viſible vapour in diſcharging the air-gun againſt a thermometer, or when it is expoſed to a ſtream of air from the air-veſſel of a water-engine, and by a ſtream of ſnow and ice being produced from the current of very cold expanding air from the fountain of Hiero in an Hungarian mine. In this way our author explains the cold on the tops of mountains, the variable temperature of different places, the frequent correſpondence of heat with the height of the barometer, and the fall of rain, when the barometer, from ſome unknown cauſe, falls. Perhaps this ſingle fact, for we believe it to be a fact, will not admit of ſo extenſive an application. But this paper is, in many reſpects, ſingularly ingenious.

Art. V. Some Obſervations on the Heat of Wells and Springs in the Iſland of Jamaica, &c. By John Hunter, M.D. F.R.S. —Dr. Hunter ſuppoſes that the mean heat of every country may be aſcertained by the heat of the ſprings; and this opinion, ſo far as it has been examined with proper precautions, appears to be well founded. If it be juſt, there can be no central heat, as the French philoſophers have formerly ſuppoſed; but the uniform heat of the earth muſt depend on the ballance between the heat of ſummer and the cold of winter. For the trial of ſprings Dr. Hunter recommends thoſe which have not much water, ſince the higher water is affected by the ſtate of the air. This is true; but he is not aware that hot and cold water mix with difficulty, when the heat does not riſe from below. Even in a pump, nearly full, after ſome water is drawn up, we have found it of the mean heat. In Jamaica, the mean heat, about Kingſton, is nearly 80°: that of the ſprings 79½: higher up the mountains, one ſpring is ſo low as 61¾: and, in the aſcent, they grow proportionally colder, till they arrive at that degree. The mean heat of the ſprings at Brighthelmſtone is 50; the mean heat of London, from the tables annexed, is about 49⅘, computed by Mr. Kirwan at about 52°. The heat of the ſea in the morning, at Brighthelmſtone, in the ſummer months, was from 58 to 63½. Its greateſt aſcertained variation is from 49 to 71. At New-York, the ſprings are from 54° to 56°.

Art. VI. A Table of the mean Heat of every Month for ten Years in London, from 1763 to 1772 incluſively. By William Heberden, M.D. F.R.S. and A.S.

Art. VII. On Centripetal Forces. By Edward Waring, M.D. F.R.S.—Of this article we can give no adequate idea by an abridgement.

Art. VIII. Experiments on local Heat. By James Six, Eſq. —In our LXth vol. p. 17. we gave an account of Mr. Six's Experiments on local heat. He has now extended them by obſervations made nearly through the whole year, and found the greateſt

variations were in October and June. In the former month, the thermometers differed moſt during the night; in the latter, moſt in the day. In June, from the 11th to the 15th, and from the 25th to the 30th, when the variations were moſt conſiderable, there were evidently two currents of air in oppoſite directions, at different heights. In general, the nearer the thermometer was to the earth, the colder it appeared. In other reſpects, the former obſervations are only confirmed. When different places were examined, it appeared, that the mean heat on the ſea-ſhore was equal to that on the cathedral tower, 200 feet above the ſea, except during a north-eaſt wind, when a little ſnow fell. The comparative trials between the heat of the wells at Dover and at Sheerneſs, we do not think convey any very uſeful information; for though they are of different depths reſpecting the level of the ſea, the firſt being nearly on that level, and the other 280 feet below it, yet the machine at Sheerneſs diſturbs the operations of nature. If there was no ambiguity from this cauſe, or from the local influence of operations near the ſource of the ſpring, the deep well at Sheerneſs is above 7 degrees warmer than that at Dover. The tables, at ſome length, are ſubjoined, but they afford no particular ſubject of remark.

Art. IX. Obſervations on the Manner in which Glaſs is charged with the electric Fluid, and diſcharged. By Edward Whitaker Gray, M.D. F.R.S.—The object of Dr. Gray, in this paper, is to examine Dr. Franklin's opinion of the electricity of glaſs, which, he ſays, cannot contain more than a certain quantity of the electrical fluid; for if more is added on one ſide, it is abſtracted from the other. This error, as our author conſiders it to be, ariſes, in his opinion, from not diſcharging the jar from the ſurface on which it is charged; but the ſubject is by no means elucidated in this ſhort paper.

Art. X. Experiments on the cooling of Water below its freezing Point. By Charles Blagden, M.D.—Dr. Blagden's obſervations are always important. It was found that mercury was often cooled below the freezing point, without congelation; and, in this reſpect, as we formerly obſerved, it agreed with water. Our author found that this property in water depended greatly on its want of air, and its tranſparency. Turbid water, or water filled with air, congealed very ſoon after it was cooled below 32°; but, when boiled, and the experiment tried with every precaution, it bore a diminution of 12 degrees below the freezing point, without congealing, though, when congealed, the heat always roſe to 32 degrees. Chemical ſolutions had not the ſame effect; for though they had a lower point of congelation, they would bear to be cooled below that point.

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'Having diſſolved, in diſtilled water, as much common ſalt as lowered its freezing point to 28°, I cooled it to 18½ before it congealed. Another ſolution of the ſame ſalt, whoſe freezing point was 16°, bore to be cooled to 9°; and a ſtronger ſolution, whoſe freezing point was 13°½, cooled to 5° before it ſhot. A ſolution of nitre, whoſe freezing point was 27°, cooled to 16°, that is eleven degrees below its new freezing point; a ſolution of ſal ammoniac, whoſe freezing point was 12°, cooled to 3°; and one of Rochelle ſalt, freezing point 27°½, ſuffered the thermometer to ſink in it to 16° before it froze; a cooling equal to the greateſt I ever obtained with the pureſt diſtilled water boiled. A ſolution of green vitriol, whoſe freezing point was near 30°, cooled below 19°: and, of ſalts with an earthy baſis, a ſolution of the common bitter purging ſalt, whoſe freezing point was 25°½, bore to be cooled to 19°.

'Acids, as I have already had occaſion to remark, rather augment this quality of being cooled below the freezing point. A combination of nitrous acid with diſtilled water, in ſuch proportions that the new freezing point was between 18° and 19°, ſunk down to 6° before it congealed; which being fully 12 degrees of cooling, is greater than I have been able to produce with pure water. Another mixture of the ſame kind, ſo ſtrong as to have its freezing point about 11°, cooled down to 1°. A mixture of vitriolic acid and diſtilled water, whoſe freezing point was 24°½, cooled to 14°; and one with the acid of ſalt having its freezing point at 25°, ſunk to 16° before it froze. It is here to be obſerved, that theſe acid mixtures were rather remarkable for the ſteadineſs with which they bore to be cooled, and the little tendency they ſhewed to ſhoot before they were ſunk much below the freezing point, than for exceeding the number of degrees which pure water might be cooled. Of the alkalies, a ſolution of tartar, whoſe freezing point was 25°½, cooled to 18°; and another, with the freezing point at 15°, ſunk to 8°. A ſolution of cryſtallized ſoda, freezing point 30°, cooled to 21°; and a ſolution of mild volatile alkali, freezing point 19°, to 11°. A mixture of rectified ſpirit of wine and water, whoſe freezing point was 12°, cooled to 5°; and another, with the freezing point at 8°½, to 2°.'

There was a great difference in the eaſe with which the experiment could be conducted in different ſolutions; but, in general, the more limpid the ſolution was, the greater cold it would bear conſiſtent with its fluidity. The motion required to make the ſolution ſhoot into cryſtals of ice and ſalt, was a general ſhock or vibration. A particular motion had little effect; a particle of ice immediately produced the cryſtallization; every agitation, however, in ſome degree, affects it. Various circumſtances neceſſary to the ſucceſs of the operation, are recited by Dr. Blagden. The cauſe of the congelation is undoubtedly a kind of polarity, conſiſting of attraction and repulſion in the particles of

matter; but we are not yet ready to agree with Dr. Blagden in the opinion publiſhed, we believe, firſt by Father Boſcovich, and afterwards by Mr. Mitchel, that particles of matter are only centres of attraction and repulſion. If fully and extenſively conſidered, it has undoubtedly great force; and our author's employment of it is very ingenious.

'To aſſiſt the conception, I have here reaſoned upon the particles of water as ſolid, and of a determinate ſhape. But it ſeems moſt probable, that the particles of matter in general are nothing more than centres to certain attractive and repulſive powers; on which hypotheſis it may be underſtood, that if two or more of theſe central points are brought much within the limits of their reſpective attractions and repulſions, theſe powers will no longer be equal at equal diſtances from their common centre. Now ſuch a combination of central points may be conſidered as one particle of any particular matter; and the unequal diſtances from the common centre at which the attractions and repulſions are equal, will define what may be called the ſhape of that particle. And if, at equal diſtances, the attraction or repulſion is much greater at one point than at another, that will conſtitute a polarity.'

We ſuſpected that the particles interpoſed, which diminiſhed the tranſparency of water, acted as ſo many points of congelation. This opinion Dr. Blagden oppoſes, though he has not well ſupported his oppoſition. Sand and plates of glaſs are not ſo intimately mixed with the water, nor are the particles in ſo great number as thoſe which render water muddy. But the truth ſeems to be, that this opinion of the mud affording ſo many centres as it contains particles, is inconſiſtent with the opinion of matter juſt detailed. There is a modification of Father Boſcovich's opinion, with which we are better pleaſed, and which would not ſtand in our author's way: it is too long to explain, but we may juſt hint, that it does not exclude matter, but aſcribes its effects to an ætherial fluid ſurrounding every particle, and producing, by its attractive and repulſive powers, the various operations, and particularly influencing their arrangement in compoſition.

Art. XI. Experiments and Obſervations relating to the Principle of Acidity, the Compoſition of Water, and Phlogiſton. By Joſeph Prieſtley, LL.D. F.R.S.—Dr. Prieſtley aims a dangerous blow againſt the doctrine of the compoſition of water. Indeed, he converts the propoſition, and ſuppoſes that, inſtead of water being formed of air, different airs are compoſed of water. We have remarked, and often urged, when we perceived it to be overlooked, that water is a component part of inflammable air; and Dr. Prieſtley thinks it is equally an ingredient in fixed,

in pure, and in phlogiſticated air. The great foundation of his oppoſition to the opinion which began to be the common one, is, that when the airs that were decompoſed were rendered as dry as poſſible, or were made with little communication with water, the moiſture produced by their exploſion was very inconſiderable: the nitrous acid was diſcoverable after it. Our author believes, that pure air is the principle of acidity, and that phlogiſton is equally ſo (ſit venia verbo) of alkalinity. He ſupports too the falling doctrine of phlogiſton, which, as we had occaſion to remark, was very nearly connected with the compoſition of water.

Art. XII. Some Obſervations on the Irritability of Vegetables. By James Edward Smith, M.D. F.R.S.—In our laſt volume, p. 222. we gave an account of M. des Fontaine's memoir on the irritability of plants. Dr. Smith confirms ſome of theſe inſtances, and adds to them a very ſingular one. In the common barberry, the ſtamina are bent back to the petals, and the anthera lies concealed in the concave tips of the petal; but, when irritated, the ſtamina bends ſo as to riſe over the piſtil. The irritable part is the outſide, where duſt would naturally fall, or an inſect fix; and no irritation, on any other part, would produce the ſame effect. After the irritation, the ſtamen returns to its former ſtate, but is ſtill capable of being irritated, and of moving to its place, over the piſtil. The ſtamina of the cactus tuna are alſo irritable: the rue moves one of its ſtamina every day to the piſtil, and then it returns to its former place. There are plants, we well know, endued with the power of a motion ſeemingly ſpontaneous; but this is never connected, ſo far as has been diſcovered, with irritability in the ſame ſpecies. Dr. Smith mentions the property in vegetables, reſembling that of animals; viz. that their conſtitution is capable only of a certain degree of action conſiſtent with health. He obſerves, in ſupport of it, that many plants have died in a winter after flowering, though they had borne a greater degree of cold in ſome former winters. We have known a plant, urged to a very luxuriant bloom, that could not make any ſhoots afterwards, and ſupported a half-extinguiſhed exiſtence, till a ſlight cold in a mild winter deſtroyed it. The piſtils remain very long, as we had formerly occaſion to obſerve, before the acceſs of the pollen; and, from this cauſe, our author ingeniouſly explains the long duration of double flowers, in which, as the organs of generation are obliterated, no impregnation can take place.

Art. XIII. Account of Experiments made by Mr. John M'Nab, at Albany Fort, Hudſon's Bay, relative to the freezing of Nitrous and Vitriolic Acids. By Henry Cavendiſh, Eſq. F.R.S. and A.S.—In our LXIId volume, p. 353. we examined Mr. M'Nab's former experiments, with Mr. Cavendiſh's very

judicious remarks. We felt ſome difficulties, and they were obvious to our author, who commiſſioned Mr. M'Nab to repeat ſome of the former experiments. The new trials confirm the former ones: there is a degree of ſtrength at which the acid freezes moſt eaſily, while the ice formed in ſpirit of nitre of different ſtrength, is found, on thawing, to be very near to this ſtandard. The ſtrength of eaſieſt freezing is 418, (or, in other words, it diſſolves $\frac{418}{1000}$ of its weight of marble) and the freezing point is then $-2\frac{1}{10}$.

Of the vitriolic acid we have had occaſion to ſay much, not only in the LXIId volume, p. 358; but, in examining Mr. Keir's paper in the laſt volume of the Tranſactions, in our LXVth volume, p. 331; and in the Foreign Intelligence in the ſame Number, p. 384. We very early pointed out the probability of the congelation being owing to ſome additional principle in the acid, and came very near in our firſt conjecture of its nature, which was diſcovered by M. Moré. Mr. M'Nab froze oil of vitriol, but the reſults are ſo irregular, that ſcarcely any thing can be gained from them.

| Strength. | Freezing point. |
|---|---|
| | 0 |
| ,977 | + 1 |
| ,918 | — 26 |
| ,846 | + 42 |
| ,758 | — 45 |

We think it inaccurate to call 848, which froze with a cold of + 46, the ſtrength of eaſieſt freezing, ſince it more probably depends on nitrous air, which is often found in it of that ſtrength, and on which its congelation chiefly depends. If there is a ſtrength of eaſieſt freezing, independent of impurity, it is that which we formerly pointed out, where the acid is ſo much ſaturated with water as to attract no more from the air.

The meteorological journal affords nothing very intereſting. The rain in 1787 was 16.971.—The mean height of the barometer 29.80. The mean height of the thermometer is put down at 51. But the heat of $83\frac{1}{2}$, which occurred at two o'clock on the 9th of Auguſt, muſt have brought this mean heat too high. It is undoubtedly an error, for at ſeven in the morning the heat was 63, and the thermometer within doors 71: at two o'clock, when the out-door thermometer gave this extraordinary degree, that within was only 73. In this period too the variation of the barometer was only .07 of an inch; and it was lower. The wind was ſcarcely altered, and the weather continued fine. The heights of 78, which occur twice in July, are ſubject to the

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ſame ſuſpicion. We mention theſe matters more particularly, ſince no tolerable conſequences can be drawn from meteorological obſervations, unleſs theſe errors are avoided. It muſt have been clearly ſeen that, in theſe inſtances, the ſun had affected the inſtrument, and they ought not to have been employed in determining the mean heat. We were particularly led to this examination from Dr. Hunter's paper of the preſent volume, where, as we have ſaid above, the mean heat of London is, from that of the ſprings, placed at $49\frac{2}{5}$. The meteorological obſervations, with theſe neceſſary corrections, will bring the heat very near the ſame ſtandard.

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*The Religion of the Ancient Greeks illuſtrated, by an Explanation of their Mythology. Tranſlated from the French of M. le Clerc de Septchenes.* 8*vo.* 4*s. in Boards.* Elliot *and* Kay.

THE tranſlator has left us a little unfairly in the dark reſpecting the original of this work, and its author. We confeſs ourſelves ignorant both of one and the other; but if, on this account, we are prevented from examining the merits of the work as a verſion, we ſhall at leaſt be more impartial reſpecting its ſubſtance. The language appears to flow freely, with great neatneſs and ſufficient accuracy: a few *wills* and *ſhalls* we have, however, obſerved to be miſplaced.

M. de Septchenes' great object is to ſhow, that the religion of the ancient Greeks is not only rational but juſt. Its great foundation is one wiſe and benevolent God, diffuſing happineſs all around, and protecting his creatures by diſpenſations equally wiſe and benevolent. Among the early Greek authors, this doctrine is clearly pointed out; and, in future ages, its ſubſtance was not forgotten, though the appearances were changed. The mythology of the Greeks ſeemed to multiply deities, though, in reality, theſe various gods implied only the peculiar exertions of the Deity in the different operations of nature, as they were beneficial to man. The religion of Greece, M. de Septchenes traces from the Eaſt, from whence it was carried to the coaſts of Aſia, bordering on the Mediterranean, and conveyed by the Phœnicians to the Pelaſgi, where an ingenious, inventive, and poetical race, enlarged its limits, and multiplied its objects. The Grecian mythology, therefore, conſiſts of the perſonification of abſtract qualities, of the ſources of our chief benefits; or of different allegorical repreſentations. The early deities were Vulcan, Minerva, Veſta, Hecate, and Nemeſis, which are various modifications of the active principle; or Rhea, Latona, Love, and Venus, which are different repreſentations of the matter which is acted on, under every form of which it is ſuſceptible. The fables of Pro-

teus and Pan, repreſent the act of creation and formation. Theſe are the gods of the earlieſt æra, who, in a more refined period, were forgotten, becauſe their meaning was miſunderſtood; and which, at laſt, gave way to deities of the ſecond claſs, or the perſonification of the divine benefits, as more brilliant and intereſting. In the country, however, where innovations do not ſoon reach, they continued to retain their credit.

The gods of the ſecond order, were Cybele or Ops, the earth; Uranus, the heavens; Saturn, the image of time; Jupiter, Pluto, Neptune, Dionyſus, Hercules, Apollo, Eſculapius, and Priapus, which are different emblems of the ſun and of the ſeaſons; Io, Juno, Diana, and Lucina, which repreſent the moon; and Mercury, which is an emblem of the horizon. There were different emblems to repreſent the planets; while the Muſes and the Fates were ſuppoſed to preſide over the harmony of the ſpheres, and their revolutions. In this part of our author's work there is much ingenuity, with little novelty; juſt and probable conjectures are mixed occaſionally with groundleſs fancy, and ſometimes with inconſiſtency. The explanation of the zodiac, for which the author is indebted to M. Dupuis, is very ingenious.

The Gods of the third order are more nearly related to men, and are perſonified from events with which we are more or leſs intimately connected. The Giants ſhow us the deſtruction and renovation of the world, which our author ſuppoſes, from the concurrence of hiſtorical records, was once effected by fire rather than by water; for the deluge was, he thinks, partial. Prometheus typifies the firſt evolution of human reaſon; the introduction of evil is repreſented by Pandora; while the crime of Tantalus is puniſhed in his moſt diſtant poſterity. The Cyclops, Telchines, Curetes, Corybantes, Dactyli, and Cabiri, devote themſelves to the manufacture of metals; and our author explains the golden, the ſilver, the brazen, and the iron age, by the comparative eaſe with which theſe metals are worked, and the gradual progreſs of metallurgy. This very improbable and incoherent ſyſtem, may be at once anſwered, by obſerving, that we ſhould have a copper age before the brazen one, as braſs is made from copper, and the latter is as eaſily worked as gold, and more generally found. Ceres and Bacchus, of this claſs, are well underſtood; and Proſerpine is ſuppoſed, as uſual, to be emblematic of the operations of huſbandry. Hermes is a type of every invention and diſcovery; but we cannot interpret the 36525 rolls to be ſeen near his ſtatue, into the exact period of the year, viz. 365.25, unleſs it be proved that the Ægyptians underſtood decimals.

Theſe were the popular deities, but there was ſomething more

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ſecret and more ſacred in thoſe hidden truths which have been ſtyled myſteries. Our author accuſes Warburton of the ſpirit of ſyſtem, when he conſiders them as unveiling the deluſions of the popular worſhip, and explaining the real nature of their deities, whom he ſuppoſes to have been men reverenced for benefits received, or for valuable qualities. M. de Septchenes, equally in the ſpirit of ſyſtem, explains the myſteries as if he had been one of the initiated. He tells us, perhaps with juſtice, for ſo far he has ſome authority, that they were deſigned to preſerve the knowlege of the ſupreme Being, and to explain the perſonification of his different attributes. He adds, with leſs reaſon, that they inculcated the doctrine of a providence, of the immortality of the ſoul, future rewards and puniſhments, the eſtabliſhment of civil ſociety, and the invention of arts. To all theſe important truths they are ſuppoſed to have added the love of juſtice, humanity, and all the patriotic virtues. Our author then ſpeaks of the ceremonies of initiation, and agrees with Dr. Warburton in a very exceptionable opinion, that the fourth book of the Æneid is deſigned to repreſent the ſacred myſteries, and the ceremonies which uſed to attend their celebration. We ſhall ſelect a part of our author's deſcription of the initiation.

'When the preparatory ceremonies were concluded, the trials began, which in many places were dreadful, and often dangerous; but in general they were confined to ſimple ſhews and repreſentations, calculated however to produce a very great effect. Continual alternations of light and darkneſs, claps of thunder, fantoms, hideous ſpectres, and dreadful cries in the midſt of the ſilence of night, ſtruck the initiated with horror, and froze his blood. After having been diveſted of his garments, he was girt with the ſkin of a fawn, to ſhew that he ought now to be ſeparated from every thing profane. As the myſteries were an emblem of death, or a ſort of regeneration, it was neceſſary that he ſhould appear to be reſuſcitated, as an emblem of new life. He was preſented with a crown, which he trod under foot, and as ſoon as the ſword was held over his head, he feigned to fall down dead, then ſeemed again to return to life. Commodus, aſſiſting one day at the myſteries of Mithras, was not ſatisfied with this counterfeited death, he was wicked enough to feaſt his eyes with the ſight of a real murder. After theſe different ceremonies, the candidate received the diſtinguiſhing robe, which he ever afterwards wore as an honourable badge.

'In this condition he waited till he received permiſſion to enter the temple. "Now, ſays Claudian, I ſee the ſacred walls begin to ſhake; and vivid light, flaſhing from the lofty roof, announces the approach of the god: already from the depths of the earth is heard the tremendous voice, and the temple reverberates the awful ſound." At laſt the portals open; at a diſtance appears a ſtatue, magnificently adorned, and reſplendent with

with light, which is meant to ſignify univerſal nature. Now the happy candidate is ſurrounded only with the moſt agreeable objects. He finds himſelf tranſported into meads enamelled with flowers; he hears on all ſides a celeſtial harmony: and when he begins to view the horrid image of Tartarus, the ſcene is immediately changed, and the enchanting fields of Elyſium open upon his ſight. The ſudden tranſition from the realms of darkneſs to that delightful abode, forms an admirable contraſt in that part of the Æneid where the poet opens to his hero the proſpect of thoſe bliſsful manſions. That deſcription is made with ſo much art, it is full of ſuch maſterly ſtrokes of genius, that though we were ever ſo little ſenſible to harmony, we may in ſome meaſure conceive from it the various impreſſions which would agitate the ſoul of the ſpectator in theſe myſteries.'

The moſt celebrated myſteries were the Eleuſinian, though there were various others, perhaps of a ſimilar kind, and of leſs importance. Initiation was a ſolemn, ſacred, and indiſpenſible duty. It covered the ſins of the wicked; its neglect or its violation were ſuppoſed to call down the vengeance of heaven, and to merit the puniſhment of men. But, when we hear of the ſacred, the inviolable, and unviolated oath, we wonder a little at our author's very particular and circumſtantial information.

The other religious inſtitutions of the Greeks were the various feſtivals, the different oracles, the Sybils, Auguries, &c. In this part, M. de Septchenes diſcovers much knowlege of antiquity, very little, if at all, tinctured with the ſpirit of ſyſtem. The ladies are not, however, greatly obliged to him for the reaſons which he aſſigns for their being appointed prieſteſſes of the oracles.

The laſt chapter contains reflections on the influence of religion among the Greeks, and its connection with legiſlation, political order, morals, and the national character. In each of theſe points, the connection was intimate; but it was rather between them and the myſterious doctrines of the initiated, than the popular ſyſtem of numerous gods.

M. de Septchenes afterwards adds a ſhort account of the moſt reſpectable authors who have treated on this ſubject; and, in his review of their different works, M. Bailly and our countryman Mr. Bryant are not received with any favour: he conſiders them as viſionaries of the firſt rank. Perhaps ſome future author may point out M. de Septchenes' errors with equal freedom, for he is not invulnerable; yet, on the whole, this volume is in many reſpects ingenious, and frequently juſt.

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*Vimonda: a Tragedy. By A. M'Donald.* 8vo. 1s. 6d. Murray.

WE would not cenſure ſeverely, nor condemn as inexcuſably improbable, dramatic performances, becauſe they are contrary

contrary to the common occurrences of life: great allowance muſt be made for compoſitions of this kind. Dramatic probability has a very extenſive range; but, extenſive as it is, the bounds which ſhould circumſcribe it have been moſt wantonly leapt over by moſt of our modern writers. Vimonda is by no means an exception. That an old baron who had been grievouſly wounded in returning to his caſtle by night, and reſtored to life in a wonderful manner, ſhould ſuſpect ſome of his family, and wiſh to find out who they were, is natural; but that he ſhould therefore make his nocturnal viſitations as a ghoſt, was likely to anſwer no purpoſe that we can ſee, but, as Bayes ſays, 'to elevate and ſurprize;' for it appears he had no confidential friend in the houſe, no truſty Abigail to hide him, like Fantom, in her cloſet, or behind the old wainſcotting. No: his ſole intent, as he tells his daughter's confidante, who alone, an extraordinary circumſtance, had courage to meet and queſtion the ſuppoſed ſpirit, was,

'at ſome fit moment
To ſtart among them: then ſurpriſe and terror
The guilty *ſhall* betray.'

The ſervants are driven before the apparition, like a flock of wild geeſe, into the preſence of Vimonda, who enquires of them,

'Was all ſecure? for this perchance may be
Some artful cheat.'

For one, juſt before deſcribed as overwhelm'd with terror, to expreſs ſuch a ſuſpicion, is certainly not characteriſtic. She receives the following anſwer.

'Impoſſible, my Lady.
The iron-gate was bolted firm as rock,
The draw-bridge up, and the portcullis down,
The moat brimful;—ſure no corporeal form
Could work its way through ſuch impediments.'

The reader may wiſh to know how this circumſtance was managed. Rothſay thus informs us,

'Nightly I walk my melancholy rounds
About the caſtle: or by a dark paſſage,
*Under the moat*, unknown to all but me,
Securely enter.'

All this exceeds, in our opinion, the bounds of dramatic probability; but much more incredible is it, that Dundore, who was the real aſſaſſin, who had the ſame opportunity as the ſervants, after whom he immediately enters, to be convinced of Rothſay's appearance, inſtead of diſcovering any terror or apprehenſion, which ſurely he muſt have felt, whether he ſuppoſed it to

be

be the baron or his ghoſt, ſhould make uſe of that very circumſtance to charge an innocent man with his death, to attribute the awful viſitation to heaven, in order to point out the murderer.

That a lady reſcued by a young warrior from ruffians, ſhould fall in love with him, ſhould for a long time attend him as a page, and afterwards on finding that he loved another, poſſeſs ſo refined an attachment for him, as to endeavour to promote his union with her, are circumſtances romantic indeed, but ſufficiently probable, if conducted with addreſs, for dramatic compoſition. Yet, when Rothſay charges Melville as having been one of his aſſaſſins, though ſhe could prove the contrary, and had told him indeed long before what was ſufficient to obviate all ſuſpicion, had not his incredulity been neceſſary for carrying on the plot, ſhe merely in a vague manner aſſerts his innocence; and when Rothſay begins to expreſs ſome doubt upon the occaſion, and wiſhes to enquire more about it—

'Alfreda tell me?'

She leaves him abruptly, with a

'No—I'll tell thee nothing!'

Surely ſuch conduct is 'paſſing ſtrange.' Melville's is much of the ſame kind, who being preſſed by his miſtreſs to ſwear that he was not guilty of Rothſay's death, contents himſelf with expreſſing a ſurpriſe at her 'daring to think him falſe.' He never condeſcends to vindicate his innocence, and only expreſſes a wiſh to meet his accuſer, Dundore, the next morning in ſingle combat. Dundore, though the challenger, is not very fond of that mode of deciſion; he therefore goes to Melville, who appears lamenting his fate at the tomb erected by Vimonda to the memory of Rothſay, and tells him, with bitter taunts, that his miſtreſs had ſent him 'a cordial, a ſmall love-token to compoſe his fears;' in ſhort, a bowl of poiſon, as he was unfit

'To ſeek in arms an honourable death.'

The good Melville is juſt going to drink it, but recollects that Dundore was 'a villain, and a deteſted liar.' He obliges him to take Rothſay's ſword, which was placed on the monument, fights with, and kills him. The ſword of Rothſay, which Dundore had produced as an evidence of Melville's guilt, proving the cauſe of his own death, is a good dramatic incident, and might have been pointed out with effect by Melville, Rothſay, or ſome other character in the drama. Melville, convinced as he was of the falſhood of Dundore, yet drinks the poiſon—How ſtrangely unnatural! After all, it proves to be no poiſon; but, on the ſuppoſition of its being ſo, Vimonda runs mad, a common diſorder of late among the tragedy-heroines, and dies upon the ſpot.

Many

Many inconſiſtencies and improbabilities, beſides thoſe we have noted, might be pointed out; and there are not wanting circumſtances to palliate theſe defects. The events are ſuppoſed to have taken place in the days of *chivalry*: a word with which we conſtantly connect the idea of ſomething wild and extravagant. A tame ſober plot would appear abhorrent to the nature of the times, and the excentric heroes of the middle ages; we had almoſt ſaid, that unleſs ſomething romantic and marvellous was attributed to ſuch characters, *propriety* would be violated. We muſt acknowlege that the *romantic*, both in the narrative part as well as the action, is here carried too far, and ſometimes borders on abſurdity. Much addreſs, however, is ſhewn in the conduct of particular ſcenes. The diction is neither too turgid, nor too tame, but in general extremely well adapted to the drama. Two ſpeeches of Melville's at the opening of the play will give a favourable idea of it. In the ſecond an image is taken from Oſſian, and not unhappily introduced, though the author owes but little to preceding writers. Vimonda having erected a monument in a foreſt, decorated with arms and ſepulchral figures, in memory of her father, the lover thus diſſuades her from indulging unneceſſary grief.

'My lov'd Vimonda, Nature, kind and free,
Pours on her various children endleſs bleſſings,
And calls us daily to admire and thank her.
Now are her vernal energies at work,
Unſeen by us, but in their ſweet effect.
She paints the roſe-bud, and ſhe paints thy cheek
With tints from heaven. 'Tis at her word yon woods
Put on their verdure and exhale their fragrance;
While all their airy tenants fluttering round,
Enjoy the genial ſun and wanton gale.
Is this a ſeaſon for black melancholy?
While life glows round us, ſhall we peeviſhly
Muſe over ſad memorials of the dead?'

'Buried in ſilent duſt thy father ſleeps.
The turf blooms over him; the daiſy there,
And ſweeteſt vi'let, nod their gentle heads:
The lambkin and the bounding fawn paſs by,
Sportive, and heedleſs of the mighty dead.
Ev'n thou, if chance convey'd thee to the place,
Would'ſt trip as gaily over Rothſay's bones,
As when to ſtrains of joy thy airy feet
Fly thro' the wheeling dance. If ſweet oblivion
Envelope with a flow'ry mantle thus
The hero's real grave, why here condemn
A guiltleſs ſpot of earth to bear a load
Of ſhapes lugubrous, of heart-chilling emblems,
And be the hated haunt of gloom and horror?'

*The Huſbandry of the Ancients. In two Volumes. By Adam Dickſon, A. M. (Concluded, from p. 102.)*

THE ſecond volume of this pleaſing work is not leſs intereſting than the former one; and, if it be ſuppoſed that our account of theſe volumes is too extenſive, we may allege, that the number of curious facts to be related, and the doubtful ones to be examined, would, without great impropriety, lead us to ſtill longer details, if they were admiſſible. Much of the Roman huſbandry is loſt, and what remains is by no means clearly underſtood; but we may perhaps diſcover practices which we might ſucceſsfully imitate, or attempts to remove difficulties which would, in different circumſtances, ſharpen our own invention.

The ſeaſons of ſowing, and the manner of proportioning ſeed to the kind of land, affords many curious obſervations. The Romans ſowed wheat in the autumn, or before the winter ſolſtice; and we continued to follow them, till the improved methods of avoiding fallows, led us ſometimes to the ſpring. Different grains the Romans ſowed in the ſpring, and never omitted this neceſſary operation till the beginning of ſummer, as we ſometimes do. The drought of Italy prevented it. Our author's compilation from different authors, is apparently exact. The meaning of *ariſtæ* is, we think, correctly rendered by the term of *ears*, in oppoſition to *chaff* (Georg. i. 221.) We are not certain that our author is equally juſt in his metaphorical explanation of Virgil's Nudus Ara, ſere Nudus. It was the time of ſevere labour, and the autumnal equinox was a period of great heat: Pliny tells us, that when news of the dictatorſhip was brought to Cincinnatus, he was ploughing *naked*, and his mouth was yet full of duſt. Heſiod, from whom our poet borrowed much, expreſsly directs the huſbandman,

Γυμνὸν σπείρειν, γυμνὰν δὲ βοωτειν
Γυμνὸν δ' ἀμᾶσθαι.

The attention of the Roman huſbandman to the different ſoils, in order to adapt to each the different quantities of ſeed, was very minute, and is correctly detailed. In the paſſage of Columella, where he directs the farmer to ſow one-fifth part more of ſeed in a field planted with trees, than in one that is free and open, our author propoſes, with much reaſon, to read one-fifth *leſs*. Yet Columella directs, in another place, that a ſtiff wet ſoil ſhould have more ſeed than a free dry ſoil; and we may conclude, that the plantations would prevent free ventilation. This argument is of ſome weight, when the change is ſo conſiderable and arbitrary, as *amplius* into *minus*.

The choice of ſeed was an object of ſome importance. We can underſtand why the heavieſt was adopted, and the foundation of the diſtinction: in ſome of the modes of determining it we differ, however, from Mr. Dickſon; but it is not eaſy to explain the reaſon why the corn was preferred which had the ſame red colour on the inſide as on the outſide. The germinating virtue, with proper care, might undoubtedly be preſerved more than twice ſeven years. We ſhall ſelect the manner in which the Ægyptians choſe their ſeed. Mr. Dickſon always uſes the word '*chooſed.*'

"The Greeks, (ſays he) aſſert, that the Egyptians tried in this manner, which of the kinds of ſeeds they intended to ſow would have an increaſe. In the month of June, they prepared a bed in a moiſt and well reduced ſoil, and having made diviſions in it, they ſowed in theſe all the ſeeds of the different kinds of corn and pulſe. Afterwards, at the riſing of the dog-ſtar, which, among the Romans, is reckoned to be on the 19th of July, they examined what ſeeds the riſing ſtar conſumed, and what were preſerved ſafe; they rejected thoſe kinds that were conſumed, and provided for their ſeed the kinds that were preſerved, being perſuaded, that this ſcorching ſtar, by the deſtruction or ſafety of the ſeeds in the ground at that ſeaſon, diſcovered which kinds next year would be hurt, and which would produce a good crop."

The manner of deſtroying weeds among the Romans, is curious, but not well underſtood. Mr. Tull contended that the ſarritio was harrowing; but our author differs from him, and we think very juſtly. We have no doubt, from comparing the different paſſages, but that it was hand-hoeing. The time and manner of performing this operation is taken from Columella. The plowing in again ſome kinds of grain, as the panic and millet, juſt as it came above ground, was firſt diſcovered by the Salaſſi, who invaded Italy, and endeavoured to deſtroy the crop by this means. Paſturing the corn, when growing too luxuriant, and thinning it by the help of a comb, are mentioned both by Virgil and Pliny. Watering the ground to deſtroy the weeds is alſo mentioned by the laſt naturaliſt. Our author compares the expence of theſe operoſe methods, and thinks, on the whole, they muſt have been, and, in the preſent circumſtances, may ſtill be advantageous.

The chapter on the crops raiſed by the ancients, of the price of corn, and the value of the rents of lands, is very intereſting. In the time of Columella, the returns of corn were, it is ſaid, not more than four-fold; and this muſt imply either an impoveriſhed ſoil, or a very careleſs management. The price of corn was not, however, ſo high as the ſtandard price at preſent:

theſe two facts would, we think, have ſufficiently ſhown that the Romans muſt have ſubſiſted on the harveſts of other nations, if we had not more certain proofs of the fact from the effects of the ravages of the pyrates. Our author ſolves the difficulty by obſerving, that the luxury of Rome conſiſted rather in rare birds, and far-fetched delicacies, than in an extraordinary conſumption of the food which they poſſeſſed; that horſes, which conſume ſo great a proportion of graſs and of grain, were very few, for the labour was chiefly performed with oxen. This is very true; but the number of people muſt ſtill have been fed, and this number was too great to admit of ſo ſmall a price, when agriculture, or the fertility of Italy, was at a very low ebb. In the time of Varro, the returns were fifteen for one; and the rents were greater in the proportion of fourteen to three, if compared with the period of Columella. When, in conſequence of this enquiry, our author examines the riches of Rome, and ſhows that the Romans were richer than any modern nation, he is ſufficiently correct; but he is not ſo with reſpect to the relative riches of the Roman citizens. One conſideration will ſhortly elucidate this ſubject: the relative riches are to be eſtimated by the diſtribution of property; but the Roman property was partly eſtimated by the value of the ſlaves; ſo that, unleſs a proper diſtinction be made, this claſs is a part of the property, while it ought to influence the ſubdiviſion of property: one hundred million, for inſtance, is to be divided between one hundred thouſand; this gives one thouſand to each, but if, of the one hundred million, ten million be the value of ten thouſand ſlaves, ninety millions are to be diſtributed among one hundred million, added to ten thouſand, which will conſiderably reduce the proportion.

What the grain is, which was called by the Roman authors *far*, has been greatly diſputed. Mr. Dickſon has not wholly exhauſted the ſubject in his very long note. The triticum and far are pretty certainly both occaſionally bearded; yet, perhaps, the outline may be allowed, and the triticum is moſt commonly without beards, the far moſt frequently with theſe ariſtæ. Far is pretty certainly the modern ſpelt, the zea of the Greeks. It is the zea *dicoccus* of Mathiolus, and the zea of Galen. It is probably the other kind of zea, the monococcus, which Pliny alludes to, lib. xviii. cap. 8. where he ſays, Qui zea utuntur non habent far. In ſupport of this opinion, we may allege the authority of Dionyſius Halicarnaſſus, where he ſays, what the Greeks call zea, the Romans call far. Virgil uſes the term robuſtaque Farra (Georg. i. 219.) which is ſupported by the deſcription of zea, in Theophraſtus (Hiſt. Pl. 953. Ed. Conſtant.) Of all the graſſes reſembling wheat and barley, he obſerves, ἰσχυροτέρον καὶ μᾶλλον καρπιζόμενον ἄλλα. He adds the reaſon,

becauſe

becauſe its roots are large, its ſtalk large, and, as one manuſcript reads, very thick. Aſclepiades remarks on a paſſage of Galen, lib. ix. cap. 3. Φαρυς, ὁ παλαιοι ζειαν. The qualities of ζεια in Galen and of the far in Roman authors are the ſame; it was a crude, heavy, indigeſtible food. In general, there is much confuſion in the Greek authors in the uſe of the term zea, unleſs we keep in mind the diſtinction of the ſpecies noted above. We ſuſpect alſo, that there are ſome other ſpecies which had the ſame name, for theſe two are not ſufficient to explain all the paſſages which now lie before us from Galen, Ætius, and Herodotus. In modern language, the far is the triticum ſpelta (Lin. Sp. Pl. 127.), but has no Engliſh name, as it does not grow in England. Mr. Dickſon gives a very particular account of the ancient methods of cultivating the triticum, the far, and the hordeum.

The next object of Mr. Dickſon's attention is the culture of the legumina, and particularly of the faba, which, it is probable, was our preſent bean: we can find no evidence for a different opinion, though, in our ſmall common bean, which comes neareſt to the ancient deſcription, ſome little variety may ſtill be obſerved. The culture of this uſeful vegetable is particularly deſcribed; but we ſhall ſelect, without a comment, our author's remarks on the opinions of the Roman farmers relating to the influence of the moon.

'Though we are not ſenſible of the heat of the moon, yet it is probable that it is in proportion to her light, and may have ſome influence in vegetation. That the corn in autumn is ripened by the full moon, is aſſerted by many farmers; and if this is true, we may eaſily believe, that, in the ſame ſituation, ſhe has an influence upon the ſeed that is ſown, and makes it ſpring ſooner. We may therefore conclude, that the directions which the Roman ruſtic writers give about ſowing at particular times of the moon, do not proceed entirely from ſuperſtition.

'The other operations which theſe writers ſay ought to be regulated by the motions of the moon, may perhaps have as little concern with ſuperſtition as theſe mentioned. For what we know, the moon may have greater influence in vegetation than is commonly ſuppoſed. The influence that ſhe has upon the ſea, in cauſing the tides, is acknowleged almoſt by all that are acquainted with theſe things. If the principles are juſt, by which the moon's influence upon the tides is accounted for, ſhe muſt have a ſimilar influence upon the air, which is a fluid as well as water; and this influence muſt be greater or leſs, according to her ſituation. The greater influence that ſhe has upon the air, at the full and change, is often diſcovered in ſtorms, which are commonly moſt violent at theſe times: this greater influence is found likewiſe in ſome caſes, to affect the animal ſtructure; and that it may have a much greater effect in vegetation, is not impoſſible. The Roman farmers, there-

ſore, in the regard which they paid to the ſituation of the moon in ſome of their operations, may have, for what we know, acted agreeably to rules eſtabliſhed by long experience and obſervation.'

The next ſubject is the culture of plants ſown for green forage, viz. ocimum, fænum Græcum, vicia, cicera, eryum, farrago: the culture of theſe different kinds of leſſer legumina is deſcribed from the beſt authors. They were ſometimes ploughed in again, to enrich the ſoil. Mr. Dickſon then proceeds to the medica, and he would have done well to have told us what it was. It is the lucerne, an artificial graſs of the kind of trefoil, and we ſuſpect, a ſpecies of the medicago of Linnæus: at leaſt, ſome kinds of the medica are to be arranged under this genus. It was a very valuable graſs, both as nouriſhment, and as a remedy in the diſeaſes of cattle, from which it probably derived its name. It is aſſerted by an ancient author, that a jugerum, about three-fourths of an Engliſh acre, will feed three horſes for a whole year. This opinion is controverted in the 'Eſſays on Huſbandry,' but ſupported by our author, from the luxuriance and nutritious properties aſcertained of the lucerne in theſe days. We have reaſon, however, to believe, that the ancient medica is not entirely our preſent lucerne.

The rapa and napus are turnips, varied probably by the difference of ſoil. We find the Roman writers complain of the fly, which we have been lately told is, in reality, a ſnail. Columella orders the ſeeds to be ſteeped in water with ſoot in it; and Palladius, to ſprinkle ſoot or duſt (for ſo we tranſlate ſpargimus) over the plants. If we find theſe two precautions joined in a new receipt for this purpoſe, it will be obvious that the author has a ſupport from antiquity, probably from experience. If the fly preys on the ſeed-leaves only, this lixivium may be effectual; but on this ſubject there is much contradictory information. Our author prefers the turnip with the oblong rather than the round top, as the latter holds the rain, which contributes to injure the root; and he obſerves, from Columella, that turnips were uſed in his time, in Gaul, as a winter fodder.

The next ſubject is the culture of flax or lint, which the Roman farmers were not fond of, becauſe it impoveriſhed the ground; and, from this diſlike, the conquerors of the world knew not the comforts of linen. It was chiefly uſed for ſails and cordage. Willows were greatly attended to by the ancients, and, from their particular management, the willow-beds were much more productive than in our times. They were not only uſed for baſkets, but for tying the vines; ſo that they were of great importance in the Roman ſyſtem of agriculture. Meadows and paſturage were ſtill of more conſequence, and grazing was conſidered

ſidered as the moſt profitable and advantageous employment. By what part of huſbandry, was M. Cato aſked, will a man moſt quickly become rich? By grazing well.—By what part may a man make his income tolerable? By grazing cattle, he anſwered, indifferently well. In theſe anſwers he ſeems to mean the moſt certain profit; for, in another part, he puts the vineyard, the willow-bed, the well-watered garden, and the olive grove, in a higher rank. The management of meadows, and the methods of making hay, are very properly deſcribed: we ſhall tranſcribe a very ingenious emendation of a very difficult and diſputed paſſage in Varro.

'In primo intervallo, inter Favonium et æquinoctium vernum, hæc fieri oportet. Seminaria omne genus ut ſerantur putari (or rather parari) in primis, circum vites ablaqueari, radices, quæ in ſummâ terra ſunt, præcidi, prata purgari, &c. Var. lib i. cap. 29. Though it does not properly belong to the ſubject of this chapter, yet it may not be improper to obſerve, that ſome copies, inſtead of *putari in primis*, have *putari in pratis*: The commentators have diſcovered a great deal of learning, and been at great pains to fix the true reading. One would think, that it does not require either much learning or ſenſe, to determine that *in pratis* is not the true reading: there were no trees in the meadows, except when the meadow was at the ſame time an *arbuſtum*, which was a very uncommon thing, and to which, if our author had in this paſſage alluded, he would certainly have expreſſed himſelf in a different manner; nothing therefore in them was pruned, all ſhrubs and large weeds were extirpated; and all work of this kind is implied in *prata purgari*. It may be obſerved, likewiſe, that the learned gentlemen are ſo attentive to the ſettling the true reading, that they neglect to explain the firſt part of the paſſage, *ſeminaria omne genus et ſerantur*; the manner of expreſſion in this, is ſo different from that of the other parts of the ſentence, and of all the parallel paſſages, that we cannot imagine that Varro intends nothing more in it than that nurſeries ſhould be planted with all ſorts of trees: it is more natural to ſuppoſe, that he directs nurſeries to be prepared for this purpoſe; and the rather, as it appears from Columella's book of trees, chap. i. and ii. that this is the ſeaſon in which nurſeries were prepared: if therefore, inſtead of *putari in primis*, we read *parari in primis*, the difficulty is removed, and the meaning obvious; and this may poſſibly be the true reading, though there is no copy to juſtify it.'

The watering graſs previous to the cutting, and the method of cutting it by night, when it was wetted by the falling dews, are particularly pointed out. The meadows were watered alſo after cutting: but this could not have been univerſal; and it is more probable, that advantage was taken of a neighbouring rill, than that ſuch an extenſive and operoſe ſyſtem, as our au-

thor deſcribes, was followed. The fire in burning was applied to the large dry graſs and weeds: it is now advantageouſly employed in hotter climates. The produce of the Roman meadows ſeems, according to Mr. Dickſon, to be about 5825 pounds averdupoiſe; but this is ſubject to much doubt: we ſuſpect, both from the words of Columella and Pliny, on which our author's calculation is founded, that to bind 1200 bundles of hay of four pounds each, is reckoned one day's work, and to mow a jugerum, another. It does not follow, that the 1200 bundles were taken from the jugerum, becauſe this muſt be ſubject to great uncertainty, and no doubt, or allowance for the difference of ſeaſons, is expreſſed in either author.

Incloſing, an object which has merited particular attention in our times, was not attended to very early in Italy. Columella does not mention them, except in particular circumſtances; and the cattle were uſed to return, on ſounding a horn, to their evening folds. At that time, parks for deer, or wild beaſts, were incloſed; and he mentions the different kinds of defence for orchards. Palladius, at a future period, deſcribes incloſures; but they were not, it ſeems, common; and it is probable, as our author ſuppoſes, that the expence was too great for the advantages derived.

Reaping is a very extenſive ſubject; and, to explain it particularly, it would be neceſſary to follow our author more cloſely than our limits will permit: the management, or the inſtruments, have never been clearly and diſtinctly underſtood. It is probable, that the corn was bound in ſheaves, but not ſet in ſtacks. The merga ſeems to have been a comb, which dragged off the ears of corn. They undoubtedly preferred letting the barley, if it was green, lie ſome time on the ground; but they carried it from the field immediately to the threſhing floor. The conſtruction of this floor, the bruiſing the corn with tribulæ, the hoofs of cattle, and with flails, are particularly mentioned. The different parts of the barn, the method of winnowing, and the uſe which is made of the ſtraw, are detailed with great minuteneſs. When the ears were combed, or cut off, the ſtraw was often left ſtanding, and was afterwards cut. Its great uſe was as litter for cattle, though the ſofter ſtraw, bruiſed in threſhing, was uſed as hay: ſometimes it was burned in the field.

The next object is preſerving corn, and the deſcription of granaries: theſe are chiefly deſcribed in the words of Columella, Palladius, and Pliny. Sometimes it was kept in ear, ſometimes in pits; but the great object was to keep it dry, cool, and *free* from the air.

The laſt chapter is a very extenſive one, on the management of oxen. This animal was conſidered as the companion of the

huſband-

huſbandman, and almoſt as ſacred. A Roman was once condemned to death for wantonly killing an ox. A yoke of oxen, it ſeems, was ſufficient for from eighty to one hundred jugera, and they were treated with care, with attention, and mildneſs. The training them in pairs, matching them equally, which was adapted to the Roman huſbandry, though not to our method, and their different foods, are deſcribed. We were, however, a little ſurpriſed to ſee a man of Mr. Dickſon's learning ſo pointedly miſtaking a paſſage in Pliny: ut capitibus ſublatis arent: he ſays, 'that they may plough with their lofty heads,' while it certainly means with their heads lifted up. In this way they will avoid galling their necks, for the yoke will chiefly bear on their breaſts. Our author afterwards deſcribes, from Varro, the kind of ox moſt proper for labour. We confeſs, that we cannot think his refinement on Varro, 'Colore potiſſimum nigro,' &c. well founded. That author certainly prefers the black ox, if, in its other qualities, it equally deſerves regard. Mr. Dickſon proceeds to the deſcription of the cow; and here the preference is properly allowed to the red cow. He concludes with examining the comparative merit of oxen and horſes, as beaſts of draught. Horſes may be of uſe, he thinks, in long journeys, or hard roads; but whether we conſider the firſt price, the expences of feeding, and the value of the ox, after it has been worked, we muſt, in his opinion, give the preference to this harmleſs, docile animal.

We muſt now leave Mr. Dickſon's work, which will afford amuſement to the claſſical ſcholar and ſpeculative farmer, as well as inſtruction to the practical one. We have not always cenſured what we thought erroneous in the tranſlation, or in the practice, or praiſed what is juſt and proper. We have culled the ſubjects of our remarks with no little care, ſo as to afford ſpecimens of the lines in which our author excels, and in which he occaſionally errs.

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*Chemical Eſſays. By R. Watſon, D. D. F. R. S. Vol. V. Small* 8*vo.* 5*s.* Evans *and* Son.

WE left our author, as a chemiſt, in the LXIſt volume of our Journal, p. 241. and liſtened, with a melancholy pleaſure, to his laſt words. This volume does not offer to us the proſpect of any change; and, if the former contained his laſt words, this may be ſtyled his laſt will and teſtament. He collects what was before printed, though not publiſhed in the uſual manner. The papers in the Philoſophical Tranſactions are well known; but the other tracts were printed for the ſake of our author's pupils. To us they are not new; but as they may be ſo to the world, we ſhall give a ſhort account of each Eſſay, which was not generally in our readers' hands.

The obſervations on the ſulphur wells at Harrowgate; the experiments and obſervations on various phænomena attending the ſolution of ſalts; ſome remarks on the great cold in February 1771; and an account of an experiment made with a thermometer, whoſe bulb was painted black, and expoſed to the direct rays of the ſun, were publiſhed in the Tranſactions of 1786, 1770, 1771, and 1773, reſpectively. The firſt new Eſſay is on the ſubjects of chemiſtry, and their general diviſion.

This Eſſay, though confined to few readers, has occaſioned ſome important criticiſms. In the period ſubſequent to its publication, numerous improvements muſt have pointed out to our author ſome miſtakes, and perhaps ſome confirmations of his opinions. The great object of Dr. Watſon was to ſhow that the three kingdoms of nature differ by ſhades ſo minute and imperceptible, that the various bodies of different kingdoms may be actually conſidered as almoſt of the ſame kind. In minerals, however, the brute maſſes, as they are repreſented in one part of the Eſſay, and the almoſt animated bodies of another part, we find a peculiar form of cryſtals, which, at leaſt, diſtinguiſh the outline, and ſometimes the more minute diviſions. The experiments which our author mentions, are juſt: different ſolutions, haſtily cryſtallized, will form, in every inſtance, a maſs equally undiſtinguiſhable. Different ſpecies of plants too, in unnatural ſituations, will reſemble each other ſo nearly as to be miſtaken; of which Mr. Bolton, in his Filices Britannicæ, has given more than one inſtance: yet, in each, with more care, the ſpecies are diſtinct, and eaſily diſcriminated. The approach of vegetables to animals, by giving them perception, affords a ſubject of controverſy, which will require nice attention. We muſt be conciſe. In every inſtance of animals, which we know to poſſeſs ſenſation, the greater the ſtimulus, if it be ſhort of a total deſtruction, the greater is the effect. In vegetables, we find that cutting, wounding, or irritation of any kind, produces no injury, if it be not done at a time when the waſte of the ſap would, in other reſpects, weaken the plant. If we examine all their motions, we can perceive nothing but irritability, and an exertion which appears to be the neceſſary conſequence of organization, becauſe it is not directed to any object. The inclination of plants to light, the motion of the leaves, and the direction of the roots, are evidently owing to irritability alone. In ſhort, we can find no proper evidence of a perceptive quality. With reſpect to the proofs of the extenſion of ſtone, it evidently depends on its nature. If depoſited from water, in conſequence of cryſtallization, the appearances will be thoſe which Dr. Watſon mentions; but if of a different kind, they will be very different. The names in the Cre-

tan Labyrinth, formerly cut in the rock, are ſaid now to appear in alto relievo; but before this fact can be adduced as a proof, it muſt be determined whether the vacuities are filled up, or the adjoining ſtone worn away*.

The plan for the courſe of chemiſtry is very well arranged, and equally full and accurate, if we conſider the æra of its formation. At preſent, the biſhop would probably ſuggeſt a very different one.

The Inſtitutiones Metallurgicæ form a part only of the chemical courſe: the author ſeems to have proceeded no farther in it than the ſubject of metals, except in ſome detached fragments, which the fire has conſumed. It conſiſts of connected ſeries of propoſitions, which would, at this time, require ſome correction, and numerous additions. There would, of courſe, be little advantage either in analyſing or making any extracts from it.

We muſt acknowlege our obligations to the right reverend author, for filling up the chaſm in his chemical works, which, but for this volume, would have been left. It is pleaſing to look back to the ground from which we have ſtarted, and where we once reſted; but to ſtay on it, or to delineate its plan, would be as uſeleſs as to copy the maps of Ptolemy for the inſtruction of a young geographer. We have not gone far beyond the æra of the biſhop's chemical ſtudies; but we ought to glory in the progreſs which has been made.

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*The Duties of a Regimental Surgeon conſidered; with Obſervations on his general Qualifications. By R. Hamilton, M. D. 2 Vols. 8vo. 10s. 6d. in Boards.* Johnſon.

THOUGH there are many treatiſes on the diſeaſes of the army, we have not hitherto had any judicious inſtitutes for the minuter parts of the regimental ſurgeon's duty. Dr. Hamilton has diſtributed the different portions of his work with great propriety, and has explained the interior duties of the ſurgeon with equal ſkill, humanity, and judgment. The hardſhips under which a regimental ſurgeon labours are feelingly pointed out; but they are, in many reſpects, exaggerated, and the remedy is not well adapted. It chiefly conſiſts in aboliſhing the office of mate, adding his ſtipend to the ſurgeon's pay, and diminiſhing the ſum allotted for medicines, to procure a farther addition to his income. It has been our fortune to ſee regiments in towns, not in barracks; to attend ſoldiers in a regimental hoſpital, and not in the field; and from this fund of experience only we can ſpeak. That the pay of a ſurgeon is low, may be admitted; but it is

* From ſome ſubſequent enquiries, it is probable that the vacuities are filled up by ſelenitical cryſtals.

the caſe with the ſubalterns alſo, who have not equal advantages in other reſpects: at all events, the office is coveted, and even bought by men of good abilities. The inconveniencies of a billet we know nothing of; for we never knew a ſurgeon, except once in a militia-regiment, accept of a billet. They lived in decent lodgings, and, if not in affluence, with reſpect. Dr. Hamilton's calculation of the number of ſick may be allowed: they are not beyond the attention of one man if they were collected. But he will recollect, that, in large towns, they are widely diffuſed; and if the ſurgeon has two men in fevers, in diſtant quarters, with the uſual proportion of other complaints, his walks, joined to the fatigue of making up his medicines, will be very conſiderable. We have known it, in no very ſickly period, ſufficient for the employment both of the ſurgeon and his mate. There are few regiments where the profits of a ſurgeon, of liberal manners, and of a humane diſpoſition, are ſmall. The officers and their families generally employ him; and the non-commiſſioned officers, the ſoldiers and their wives, compenſate for his little extraordinary attentions, by their labour in his ſervice. The medicine-money, if there is a ſurplus, is already his own; and we know one advantage only in diſpoſing of his mate, that he ſometimes eſcapes from a rival: the money, with proper care, he does not greatly want. We mention the rival chiefly to remark, that it has occurred in more than one inſtance, where the ſurgeon was a man of real abilities and diſtinguiſhed humanity, that the mate, with talents greatly inferior, was preferred. Though the ſurplus of medicine-money comes to the ſurgeon—we ſpeak it to the honour of the army-ſurgeons—no medicine, however expenſive, has been denied, which a phyſician preſcribed. We have known a man, in the latter end of a fever, ſupplied with muſk in large doſes, while the officers in the meſs have curtailed their own allowance of wine, to ſend a bottle or two, if neceſſary, to the ſick. Yet it has happened, that the mortality in regimental hoſpitals has, from various cauſes, been greater than in private practice, where the diſeaſes and the ſymptoms have been equally ſevere.

Theſe are the reaſons why we think Dr. Hamilton's arguments for an alteration inſufficient. We have ſaid nothing of rank, for among gentlemen it is of little importance; and if a ſurgeon is reſpected in a corps, if he is an honeſt, humane, ſkilful, and obliging man, his rank is as high as it need be.

There are many curious and important facts ſcattered in theſe volumes: ſome very important diſſections, with remarks on their utility: one caſe diſtinctly related, where the Brunonian practice (peace to his manes, we war not with the dead) was carried very far with little advantage: ſome good obſervations on the comparative healthineſs of different places, and a proper diſcri-

mination

mination of the ſurgeon's duties, which our author contends are rather of a medical than a chirurgical caſt; he means in times of peace, and in towns. His ſurgeon's library does not, in general, meet with our approbation; and one important part of his work, a regimental pharmacopœia, is omitted.

On the whole, theſe volumes are uſeful, though often tedious, and generally diffuſe; they are written with neatneſs, and ſometimes with elegance. The preſs-errors are numerous; and there are ſome little overſights which, we think, cannot be charged to the printer. If any other perſon ſhall deſcribe the works proper for a camp, or a regimental hoſpital, we hope he will not omit the 'Duties of a Regimental Surgeon conſidered.'

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*Of the Origin and Progreſs of Language. Vol. II. III. and IV.* 8*vo.* 15*s. in Boards.* Cadell.

THE publication of a fourth volume reminds us of the former volumes of this learned, curious, and excentric work. We perceive, with ſome regret, that we have not followed lord Monboddo's ſteps with the cloſeneſs which his character would have required; but, while our readers may complain of this unavoidable overſight, they will reap advantages from the connected examination which will more than compenſate for the delay of what can, in no ſenſe, be ſtyled a temporary ſubject.

In our XXXVth volume, p. 366, we conſidered lord Monboddo's firſt attempt, and aſſented to his principle, though we were obliged to differ from him in the whole extent of his argument. We muſt ſtate the matter very ſhortly. His lordſhip contends, that language is not natural to man: we agree with him; for men, not born in ſociety, have rude, guttural, and unmeaning ſounds. At the ſame time, it is not artificial; for no race of men ever conſented to form a language, and the cultivation which would have fitted them for this taſk could not have been obtained without a method of communicating ideas. The great diſpute is, therefore, about words: the capacity of uttering articulate ſounds is natural; and the ſounds which nature dictated are refined by reflection, the pleaſure ariſing from the ſofter and more euphonic tones, and the various ideas neceſſary to be communicated in different views. It is the ſame with our ideas: thoſe of impreſſion are natural, becauſe they ariſe from a natural capacity, and are neceſſary effects of peculiar bodily organization. They are arranged by art, they are diveſted of their particular forms, and by abſtraction we are able to predicate of the thing in general, independent of its particular appearance; but we contend, that, in this ſtate, they no longer merit the term of ideas, becauſe the mind has no perception of them, except in relation to other things. But to return to the ſecond volume of lord Monboddo's work.

After

After our author had shown how men became first possessed of the faculty of speech in its rude and imperfect state, he proceeds to consider how it became an *art*, to point out wherein the art consists, and the difficulty which must have attended the first advances. The great difference between his lordship's opinion and that which we have considered as the just one, arises from this, that he considers this perfection to be owing to philosophy, and we think it arose from the necessary wants of active minds. This difference continually occurs: we shall select the first specimen, in which it appears to be striking.

'The Cyclops, in Homer, counted his flocks by fives, which Homer calls πεμπαζειν. The Caribbs count in the same way, likewise the Blacks of the coast of Guinea. Aristotle, if I am not mistaken, speaks of a barbarous nation of his time, whose arithmetic went no farther than four: and that of certain savages upon the banks of the river Amazons, according to Mons. de la Condamine, went no farther than the number three; by which I do not understand that they counted no farther than three, but that after they had come to three, they turned back, as we do when we come to ten, and said, three and one, as we say ten and one. It may seem surprising, that a nation, after they had gone so far as to separate from the mass of multitude three units, and put them together, should not have gone a little farther, before they turned back, at least as far as the number of their five fingers; but we know, from many other facts, how slow the progress of invention has been. However obvious, therefore, a thing may appear to us, nursed in the bosom, as it were, of arts and sciences, we ought not from thence to conclude that it was so to the first men, who had every thing to invent: and to one who considers this matter rightly, it will rather appear surprising, that those other nations should have come the length of the decimal arithmetic practised by us, and have been so far complete arithmeticians as we. Perhaps it was the number of the ten figures that first led men to this method of calculation. But I rather think it was science and philosophy: for the number ten is the completion of numbers, in so far as it contains numbers of all different kinds, even and odd, primary and composed, perfect and imperfect, square and cube; and from thence it is said to have had its name of δεκα in Greek, which is supposed to be derived from δεχομαι, signifying to contain. It was therefore very proper to make this number the *cardinal* number, upon which, as upon a *hinge*, all the other numbers should turn. See *Jamblichi Comm. in Nicom. Arithmetic.*—If this be so, it is evident that no barbarous nation could have fixed this boundary of the infinity of numbers, but must have got the invention from some other nation considerably advanced in arts and sciences, in the same manner, as I suppose, that those barbarous nations who speak a language of art, have not invented it, but borrowed it from other more civilised nations.'

After

After lord Monboddo has ſhown that two different ſtates of language muſt exiſt, the rude and imperfect, as well as the refined and artificial, he proceeds to examine the requiſites of the language of art. The formal part of language is firſt analyſed; and both the form and the matter muſt, he thinks, have been known prior to the invention of writing, which is true only, if the preſent letters have not ariſen on the perfection of ſymbolical characters. Our author then proceeds to the diviſion of words into nouns, verbs, pronouns, and articles, with their different inflections, tenſes, &c. to the indoclinable parts of ſpeech, and to words in general. The Greek language is the great object of his attention; and he finds in it all the perfection which language can poſſibly receive. The whole is derived from αω, εω, ιω, and υω.—Start not, gentle reader, and think of a, e, i, o, and u, for lord Monboddo finds many ingenious and important arguments for its foundation. This philological world, of his own creating, for ſo it really is, deſerves very particular attention, ſince whatever becomes of the ſyſtem, the reader will be truly inſtructed by the remarks which it ſuggeſts. He at laſt enquires whether words were ever of themſelves ſignificant; and decides in the negative. They are ſuppoſed to be the invention of a poliſhed age, with a view to derivation and inflection. He ſpeaks, however, chiefly of the Greek language.

If this book is curious, the following one is more ſo; but we can only point out the ſubjects of diſcuſſion. It is called the material part of language, or language conſidered as ſound only. Our author divides the ſound of language into three heads: articulation, accent, and quantity. Theſe are ſeparately examined: the ancient accents, he thinks, were real notes of muſic, diſtinct from quantity, which is a ſpecies of the rythm, or, as our author calls it, a relation of the parts of motion; rather a ſucceſſion of ſounds and motions, which can be diſtinguiſhed and pointed out.

The third book is on the compoſition of language. Lord Monboddo firſt treats of ſyntax, and diſtinguiſhes it into three different kinds; which are illuſtrated by examples from various ancient and modern languages. He next examines the compoſition of languages, either as it regards ſyllables, words, ſentences, accents, and quantity. After interſperſing various remarks on the compoſition of the ancients, comparing it with that of the moderns, and, as uſual, giving the preference to the Greek, he concludes, that a regular language, or a language of art, muſt have been the work of men of ſcience and philoſophy: the ſame art muſt alſo contribute to preſerve a language which was neceſſary to form it. The Latin was, in many reſpects, imperfect and irregular: the little merit which the Engliſh

liſh may poſſeſs, is verging, in his opinion, to decay. We ſhall tranſcribe the ſummary of our author's panegyric on the Greek.

'I have endeavoured to ſhow that the expreſſion of the Greek language is full and accurate, but without any redundancy of words;—that its flections ſave the multiplication of words unneceſſarily; expreſſing all that can be conveniently expreſſed in that way, and nothing more;—that its radical words are as few in number as poſſible, and ſo framed as to anſwer admirably well the purpoſes both of flection and derivation;—that in the whole ſtructure of the language, they have had a proper regard to the ear, as well as to the underſtanding, and have employed the whole power of elemental ſounds, to make their language both ſoft and manly in the pronunciation; and to ſo perfect an articulation they have added melody and ryhthm, by which they have given their language all the muſic that a language ought to have;—in ſhort, that the ſyſtem of the Greek language is complete in every part, in ſound as well as ſenſe; and that the art of it is ſo perfect, that every thing in it is ſubjected to rules that can by its nature be ſo ſubjected. On the other hand, it appears, that the languages of northern extraction, and particularly the Engliſh, are compoſed almoſt altogether of hard inflexible words, monoſyllables for the greater part, and crowded with conſonants, that do not eaſily coaleſce in ſound, and that theſe words are unſkilfully tacked together by ill-favoured particles conſtantly recurring, and fatiguing the ear, without either melody or rhythm to ſoften the harſhneſs of ſo rude an articulation.'

The chapters on biſhop Wilkins' philoſophical language, and on the Chineſe language, are very curious. Lord Monboddo derives the laſt from Egypt, through India, though without ſufficient foundation. Oſiris, we believe, rather received improvement from India, than carried it there; and it is not very conſiſtent to derive the Chineſe from Ægyptian hieroglyphics, when he has denied that hieroglyphics ever formed any ſtep in the progreſs of languages. Two ingenious diſſertations on the formation and ſound of the Greek language, and a truly valuable one on the compoſition of the ancients, conclude this volume.

The third volume is, in many reſpects, excellent: it treats of ſtyle, and is full of admirable remarks, dictated by a claſſical taſte, and ſupported, if we except a few predilections, with juſt arguments. It is from the beſt ancient authors that a juſt and proper ſtyle is to be adopted, not by copying their idioms and phraſes; they agree not with our language, but by tranſferring ſome parts of their arrangement, their energy, and their ſpirit. Perhaps lord Monboddo carries his ſyſtem too far, when he praiſes, with little diſcrimination, Milton's proſe ſtyle, though he has adduced, from his works, particularly the Icon Baſilike, ſome of the

the happieſt ſentences that we have ever read, with reſpect to energy, perſpicuity, and a moſt beautiful arrangement. Lord Monboddo treats particularly of ſtyle, and divides it ſo as to reſpect ſingle words, or a compoſition of words. He treats of the changes of ſound, in different words of various languages; of words, either as radical or derivative. Many of our words, derived from the Latin, are from that language in its decline. He next ſpeaks of tropes and metaphors, and give ſome judicious advice for their uſe.

The ſecond part of ſtyle reſpects either the ſound or the ſenſe, and under the firſt, lord Monboddo has arranged the different figures. His Engliſh examples are almoſt entirely taken from Milton, in whoſe works, particularly the poetical ones, he points out various figures of great beauty, and ſome which, though they ſhare our author's applauſe, yet ſeem to ſtiffen his language even beyond the dignity of the epos. As we have commended his lordſhip's remarks on arrangement, we ſhall ſelect his obſervations on that of Engliſh.

'But what is the right arrangement in Engliſh? For this it would not be eaſy to give particular rules; nor, indeed, would it be worth the while to attempt it, as a good natural taſte, without which nothing good can be done in any art, and the ſtudy of the beſt authors, will ſufficiently direct us. But ſome general rules may be given. And, firſt, our arrangement muſt be ſuch as the nature of the language will admit, without obſcurity or ambiguity; for we cannot pretend to that liberty of arrangement which the Greek and Latin authors uſe. Secondly, we muſt have regard not only to the grammar of the language, but to cuſtom; for we will not endure, in favour of any author, to have our ears violated by a compoſition altogether ſtrange and unuſual. But cuſtom allows a conſiderable latitude in Engliſh, much more than in French, and more in poetry than in proſe, that being one way in which our poetic ſtyle is not improperly diſtinguiſhed from proſe compoſition. Further, it muſt be as agreeable to the ear as it can be made of ſuch rough materials as we have to work upon. Laſtly, and what is principal, it ſhould be ſuch as to convey the meaning as clearly and forcibly as poſſible.'

Where the compoſition reſpects the ſenſe, it is neceſſary, in lord Monboddo's opinion, to diſtinguiſh the ethical ſtyle, where the ἦθος, character or manner predominates. Deſcription points out the particular figure; action or imitation, the peculiarities which it is enabled to imitate; but to write ethically, the author muſt permit his hero, or his perſonages, to deſcribe themſelves by their ſtyle, their language, and their ſentiments. We have an admirable inſtance of this in Gulliver, where the plain unaſſuming ſailor is diſtinguiſhed in every word, and every motion,

and

and where we ſee the Lilliputian, but nothing peculiarly deſcribed in the author except his comparative ſize. The characters of Tom Jones are admirably ethical, in the ſame way, and this is the only work which lord Monboddo has pointed out. The oppoſite ſtyle to this ethical one is irony; though our author makes it a ſpecies.

The next object is thoſe figures which vary the ſenſe, independent of paſſion and character, as the ſimile, allegory, antitheſis, &c. Inſtead of didactic rules, and dry explanations, the author has exemplified his opinion by ſome extended remarks on the Georgics, and on an Engliſh work, Dr. Armſtrong's excellent poem on health. In theſe, he chiefly inſtances the variety of compoſition, and gives ſome very juſt remarks on the ſtyle of different authors, particularly lord Bolingbroke. Of the plain unornamented ſtyle, he gives many good examples; and the remarks on it are ſingularly juſt. Of the ornamented ſtyle, he notices two kinds, the auſtere, as that of Thucydides, Tacitus, and an earlier hiſtorian, whom lord Monboddo ſuppoſes that he imitates, Salluſt; and the florid, or the ſtyle of the latter ages, when rhetoric corrupted the manly dignity of the republic. The criticiſm on Tacitus is, in ſome reſpect, juſt; but, in our opinion, much too ſevere. The middle ſtyle is that of Demoſthenes in Greek, and Atterbury in Engliſh; the ſublime is the ſtyle of the ſacred Scriptures and Homer: the ridiculous furniſhes ſome obſervations of a mixed character, but in general juſt; the witty is explained with ſome accuracy and propriety; and the humorous ſtyle is characteriſed with great juſtneſs.

Lord Monboddo then proceeds to the particular characters of ſtyle, as adapted to converſation, public ſpeaking, and different kinds of compoſitions, mixed with a little too much ſeverity in the remarks on modern hiſtorians, and a little inconſiſtency. Compoſition is, indeed, an art, as our author contends, originally learned from the Greeks; and thoſe who come neareſt to their adorned ſimplicity, are the beſt authors. Yet we think Milton's ſtyle more of the Latin than of the Greek caſt. If he has borrowed arrangement from the Greeks, he is indebted often for idiom to the Romans. If then compoſition is beſt learned by imitations, the Grecians, or their moſt ſucceſsful imitators, ſhould be ſet before the writer as his model. Theſe imitators, according to our author, are Milton, Hooker, Spratt, Clarendon, and Wilkins. For our encouragement, we are told, that compoſition is not ſo difficult in Engliſh as in Greek or Latin, becauſe we have no rhythm or melody in our language. Lord Monboddo recommends avoiding the appearance of too much art, and exerciſing ourſelves in compoſition, ſo as to make different ſtyles, from the ſame words, by a varied arrangement. Too

great

great labour is peculiarly conſpicuous in the florid ſophiſtical ſtyle, which lord Monboddo particularly condemns in the modern writers. The different ſophiſtical ſtyles are diſtinguiſhed and deſcribed.

A ſhort account of the revolutions of learning follows, in which there is much that may be conſidered as erroneous, for the cauſes aſſigned by the author have not, we think, produced all the effects which he has attributed to them. The method propoſed for reviving the taſte of ancient learning is much more judicious. In the concluſion of the third volume, the author is ſingularly happy in his addreſs to the luxurious; but we fear he will be unſucceſsful in recommending ſtudy.

In the fourth volume, we perceive a little of the garrulity of old age: the ſubject is unreaſonably ſpun to a length which, though we allow it to be important, renders it at laſt fatiguing. We are weary of the unceaſing excellence of the Greeks, and we muſt give a very ſhort analyſis of the contents only.

Variety undoubtedly conſtitutes beauty in every language, and every ſubject. Our author obſerves that, in this reſpect, many barbarous, and ſome poliſhed languages, are deficient: ſpirits and rhythm they only poſſeſs occaſionally. One remark we may inſert, for we think it ingenious. The length and harſhneſs of the words in the imperfect languages are attributed to a defect in articulation, ſo that ſome additional ſyllables are required for diſtinction; but there is a conſequence which may be drawn from this, that lord Monboddo is not probably aware of: the poliſh and beauty of language may, in this way, be derived from the perfection of the bodily organs concerned in pronunciation. The number of words conſtitutes the copiouſneſs of a language; and they are prevented from being too numerous, in the more perfect languages, by flexion. The ſignification of words ſhould be accurately defined, and connected, where connection is neceſſary, by derivation and compoſition. In moſt of theſe reſpects, barbarous languages are deficient; they ſupply the want by tones and metaphors. There muſt undoubtedly be a greater variety in compoſition than in words; and it is lord Monboddo's opinion, that there is ſome art of compoſition, even in barbarous nations, where public ſpeaking is cultivated.

The reverſe of the picture is more pleaſing to the author: all the imperfections of language are removed in the Greek; and, whether we regard the ſound, the words conſidered as ſignificant, or compoſition, the Greek language is moſt perfect. It is ſaid to reſemble the Sanſcrit language in two particulars at leaſt. The one point of reſemblance is, that it is the matrix of a language; for if the rules of analogy are underſtood, any number of intelligible words may be coined, and, of courſe, it may be extended

to any ſcience. The other, that both are ſacred languages: the Greek of Homer was too good for the common people.

The Latin is repreſented as a good kind of language, but much inferior to the Greek. It is the older Greek, and nearer to the oriental tongues. Its defects are pointed out; but it is allowed that, in poetry, its arrangement is ſuperior to the Greek. In the proſe, our author thinks that he obſerves a tedious ſameneſs. He then examines the modern Greek, and is very ſevere on the Engliſh pronunciation of it. He conſiders the Engliſh, French, and Italian, and is chiefly employed in pointing out their imperfections. Some remarks on the matter and form of language, which lord Monboddo is apt to repreſent as an art almoſt beyond uninſpired humanity, conclude the firſt book.

The ſecond book relates to ſtyle, and its different kinds. Our author begins with ſhowing, that public ſpeaking, as well as private converſation, is an art. Writing is an art of the higheſt importance; and, except in mathematics, where perſpicuity only is required, the art of ſtyle deſerves great attention. For writing well we are indebted to the Greeks. Lord Monboddo returns to the excellence of variety, and introduces again his favourites, with their accents, and their rhythm. The ſubject of accents is purſued through all the modern languages; and that of arrangement in compoſition, as well as of the Grecian rhythm, ſcarcely changes the form which it aſſumed in the other volumes.

The different kinds of ſtyle afford ſomething new. The epiſtolary ſtyle is well defined; and dialogue-writing, which is only converſation written, introduces ſome very good remarks on the language and manners of converſation. The ancient ſtyle of dialogue-writing, which we have more than once had occaſion to commend, is very well explained; and many of the ancient dialogues are analyſed. Lord Shafteſbury's dialogue, 'the Moraliſts,' is alſo examined at length, and praiſed with ſome warmth. The Demonſtration of the Being and Attributes of a God, in this piece, is ſuppoſed to be ſuperior to, and more complete than Dr. Clarke's. To Mr. Harris's Dialogues our author is not willing to allow the name; yet he owns, that they are works of no little merit.

The remarks on the ſtyle of hiſtory give occaſion to much repetition; but many juſt obſervations occur on the poetical ſtyle, and the difference between the ſtyle of Homer and that of hiſtory. Achilles Tatius, a Greek hiſtorian of the fourth century, has been diſcovered by lord Monboddo to write like Salluſt and Tacitus: of courſe he is condemned. One whole chapter is employed on Herodotus, who, like an epic poet, is ſuppoſed to have only one ſubject, with which he opens his work,

while

while he brings in the hiſtory of the whole world, as epiſodes. Since we do not perfectly underſtand the following paſſage, we ſhall tranſcribe it.

'As to his veracity, I do not believe that there is a lye in the whole book; though no doubt he relates many things that are not true, and which he did not believe himſelf, as he tells us, even when he ought to have believed it, as we know now that they were certainly true.'

Herodotus' ſtyle, his manner, and his religion, are particularly noticed; and with this author the volume concludes. In a ſubſequent volume, the hiſtorians of the Roman empire, with the modern hiſtorians, will be examined; and lord Monboddo means to proceed to the didactic, rhetorical, and poetical ſtyles, which will complete the work.

We own, that we wiſhed to have examined theſe volumes at a greater length, and to have pointed out, with ſome accuracy, the author's merits and faults. If we look at lord Monboddo as whimſical, capricious, and prejudiced, he may perhaps fall in our eſteem; but we think theſe faults are more than compenſated by extenſive knowlege and profound learning. It ſhould be alſo remembered, that his excentricities are harmleſs; his opinions are not obſtinately obtruded on the world, for his motto may juſtly be, Quis leget hæc? vel duo, vel nemo; and his prejudice, if it may be called one, is in favour of a language which has been the object of every ſcholar's admiration for more than 2000 years; in which ſcience was cultivated, and has been preſerved, and which certainly unites more copiouſneſs, beauty, and preciſion, than any other. We cannot mention our author without reſpect, for we owe much to his work: when we would uſe the language of admiration, his little weakneſſes, venial indeed, check eager panegyric; and we are almoſt inclined to adopt the words which Cicero uſed of Auguſtus,

Laudandus, ornandus, et tollendus.

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*A Comparative View of the Mortality of the Human Species, at all Ages; and of the Diſeaſes and Caſualties by which they are deſtroyed or annoyed. By William Black, M. D.* 8*vo.* 6*s.* Dilly.

WHEN rhetoric aſſumes a new form, and the progreſſive improvements in ſtyle are ſyſtematically aſcertained, we hope that the mawkiſh and affected will not be forgotten. Dr. Black's work will afford numerous and ſtriking inſtances of it.

'But, previous to the diſcuſſion of the general theme, it will conduce to order, and to the anticipation of explanatory digreſſion and illuſtration, to glance at the ſtation, rotation, and rank

of our parent planet amongſt the other celeſtial orbs; at its inveſting elements; and at the number, groups, and recruit of mankind. A navigator or hiſtorian, who undertakes the deſcription of any iſland, kingdom, or continent, commences with their geographical outlines and climate, penetrating afterwards through a ſcrutiny of the inhabitants. Upon a ſimilar, but more majeſtic model, our introductory preface is founded. Throughout the whole of this intricate, ſublime, and inexhauſtible ſubject, if I do not delay ſufficient time to fix, I ſhall at leaſt hope to ſtart the reader's attention to a variety of grand objects, inſeparable from a comprehenſive knowledge of medicine; and of which I ſhall touch the fundamental keys and chords.'

Theſe are our author's reaſons for giving an account of the ſolar ſyſtem, and a general outline of geography, with a deſcription of the different races of mankind. Our extract affords alſo a ſpecimen of Dr. Black's language. Once more.

'Attend next to the ſmall proportion of infant mortality in open country diſtricts. By Dr. Short's regiſters of ſeveral ſmall country villages in England, the major part born live to 25, 27, 33, and 40. In many healthy country pariſhes, half the inhabitants born live to mature age; to 40, 46, and a few even to 50 and 60; and rear large families of children. In ſome extenſive country diſtricts of Switzerland, ſimilar obſervations have been made by Suſmilch and Muret. Here, therefore, is an aſtoniſhing diſparity between the duration of city and country life: but particularly, let it be engraved upon the memory, in the early ſtages of puerile exiſtence. Infants in cities reſemble tender delicate plants excluded from freſh air; or fiſh confined in ſtagnant putrid water: they periſh before acquiring a ſolidity and ſeaſoning to endure the adulterated quality of the ſurrounding element; and their thread of life is then ſuſpended by a tender cobweb.'

Dr. Black proceeds to give ſome account of the comparative mortality of town and country; of different ages, ſexes, and conditions; the number of marriages, and of births. The proportional mortality of different diſeaſes, with the numbers and proportions of each, which he juſtly obſerves are not the ſame with the mortality. If, for inſtance, one thouſand die annually of a cancer, we are not to ſuppoſe there are more cancers than boils. All this would be very good and very proper, if our author had given us the leaſt information which we had not before, or had not contaminated the pure ſources of philoſophical and mathematical language by the ſtyle and phraſeology of a petit-maitre. From page 75 to 408, that is 333 pages out of 430, is taken up by a deſcription of diſeaſes, with their different cauſes; and in this part, as well as the former, whatever relates to the

mortality

mortality in London, is taken from the bills of mortality, which he afterwards tells us are ſo very incorrect, imperfect, and confuſed, as to be really of no value. We have carefully examined his whole work; a taſk laborious, tedious, and diſguſting: but we have collected ſo little that is new, valuable, or important, that we think it may be almoſt compriſed in the following quotation.

'Female diſeaſes, including obſtructio menſium, chloroſis, profluvium menſium, fluor albus, hyſtericks. Theſe derangements of the human machinery, which, from the days of Hippocrates, have been diſcriminated by ſpecifick morbid names, are notwithſtanding unnoticed in the London regiſters; unleſs perhaps riſing of the lights, ſpleen, and vapours are ſubſtituted as a portion of hyſterick mortality. This formidable phalanx, whoſe frequency and fatality are of univerſal notoriety, muſt be muſtered amongſt the chronic hoſt of diſeaſes. From about the period of puberty, ſeldom earlier, they begin to infeſt numbers of the female ſex. On a careful peruſal of nearly one half of the books of the Alderſgate Diſpenſary in London, and before mentioned, during ſix years, I found the total ſick and diſeaſed amounted to 29,511: by far the greater proportion of which were adults, and more females than males. Of this twenty-nine thouſand, the numbers afflicted with different female complaints were as follow: obſtruct. menſ. and chloroſis, 254; profluvium menſ. 270; fluor albus, 446; hyſteria, 1104; total, 2074. Here it is worthy of obſervation, that four only of the principal female infirmities conſtituted nearly one fourteenth part of all the diſeaſes in that Diſpenſary, which is open to afflicted patients of every deſcription and age. I ſhould, however, not omit to add, from the information of one of the learned phyſicians of that charity, that under fluor albus, a few caſes of venereal gonorrhœa were concealed; and that under hyſteriæ, were arranged all female and nervous complaints, without ſtrictly attending to its generick ſymptoms. We have here likewiſe, one proof that uterine relaxation is a more frequent female malady than obſtruction in London: it is more ſo in warm than in cold climates: and probably, all theſe four female diſeaſes are more prevalent amongſt the higher and luxuriant ranks; and in city than in country.'

A chart of the mortality of the human ſpecies in London for ſeventy-five years is prefixed, divided into periods of fifteen years, becauſe our author thinks that the proportion of the inhabitants in the metropolis to that of the whole kingdom, is as one to fifteen: conſequently the ſame number gives (that is, it would give, if it was nearly correct, and every part was ſubject to equally fatal diſeaſes) the mortality of one year in all the reſt of Great Britain. At the end is a chart, comprizing the probabilities of lives in different parts of Europe, ſelected from the beſt writers.

Our author's plan is imperfect, becauſe he has not conſidered external diſeaſes and accidents; but for this omiſſion he has apologiſed. He obſerves, with ſome exultation, that the work was completed in four months: we wiſh that he had employed four years about it; and we might then have found the volume reduced to one-ſixteenth of its preſent bulk.

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*Memoir of a Map of the Countries comprehended between the Black Sea and the Caſpian; with an Account of the Caucaſian Nations, and Vocabularies of their Languages.* 4*to.* 5*s.* Edwards.

THE ſpot which our author has illuſtrated with a pretty accurate map, is not leſs famous in ancient than in modern, in civil than in natural hiſtory. Where the ſea of Aſoph ſtretches to the eaſt, and a little to the north, ſeemingly extending to meet the Don in its circuitous courſe, we may fix the northern boundary. The Wolga bending downward almoſt to join the Don with the weſtern ſhores of the Caſpian, lie on its eaſt; the eaſtern ſide of the Black Sea is on its weſt; and its ſouth is bounded by the frontiers of Perſia. In this diſtrict lay Colchis, the object of the firſt naval expedition; the Amazons, whoſe ſingular cuſtoms have amuſed the world more than two thouſand years; the Circaſſians, who have contributed to render the Turkiſh nobility the handſomeſt men in the old continent; and the Georgians, whoſe ſpirit and whoſe misfortunes have alternately excited our admiration and our pity. Their civil hiſtory is in many reſpects ſingular; and while we ſurvey the ſandy deſerts to the north of the Cuban, once perhaps the bottom of that ocean which united the Euxine to the Caſpian, the various treaſures which this region has afforded to the botaniſt and to the phyſician, we ſhall own that it is no leſs important in the eye of the natural hiſtorian. In a geographical view, we cannot ſpeak highly in favour of the memoir. The map differs in many reſpects from what we have uſually conſidered to be correct; but we have no account of the method by which the different ſituations are aſcertained. They depend principally, we find, on the accuracy of the Ruſſian obſervers. Though they differ, however, we have no reaſon to think them incorrect, but we wiſh to have had the foundation of the deciſions explained.

Our author firſt deſcribes the general hiſtory of this ſpot, and its ancient diviſions: he then proceeds to the northern nations pointed out by profeſſor Guldenſtaedt, who was ſent by the empreſs of Ruſſia to examine this almoſt forgotten territory. It would not be very intereſting to read a liſt of barbarous names; ſo that we ſhall ſelect a few circumſtances of the polity and the manners of theſe nations which ſeem to be of the greateſt importance.

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The Circaſſian government is regal and deſpotic; but as their power depends on the number of their vaſſals, the deſpotiſm is not wantonly oppreſſive. The excurſions of mountaineers are prædatory: but they think the term of thief the greateſt reproach, as it implies detection. The political regulations ſeem to be carried on by the king, the nobles, and the delegates of the people; but though we perceive three eſtates, there is little balance and little real liberty. The beauty of the Circaſſians is well known: the great object of the mothers is to confine the waiſt, which is done by a broad belt, and it is worn till it burſts; then another is put on and worn till the ſame event occurs: the belt is cut by the huſband on the day of marriage. The Circaſſian wives are ſpirited, active, and martial; fond of their huſbands, though they live, or at leaſt are ſuppoſed to live, in different huts. The men are abſtinent, firm, intrepid, and ingenious in war.

'The foregoing deſcription of the Circaſſians, as far as relates to the free ſpirit of their government, their general modes of life, and many of their particular cuſtoms, is equally applicable to all the mountaineers of Caucaſus, and probably to every uncivilized nation upon earth. But two of their cuſtoms ſeem peculiar to themſelves. The one, by which the huſbands are prohibited, under pain of infamy, from publicly converſing with their wives, ſo that the two ſexes are divided, as it were, into two diſtinct communities;—the other, by which the education of all male children is entruſted to ſtrangers in preference to the parents, the females only being brought up by their mothers. It is not eaſy to conceive from what diſtant nation theſe ſtrange regulations can be derived; and if we ſuppoſe them to have exiſted at an early period in mount Caucaſus, they may perhaps account in ſome meaſure for the fabulous deſcription of the Amazons and Gargarenſes, who are placed by ancient geographers in the country now occupied by the Circaſſians.*'

The dialect of the Leſguis has ſome reſemblance to that of the Samoiedes, and to no other. This fact leads our author to examine the origin of the Samoiedes. He ſeems to think that the Huns are in part compoſed of this race. It is more probable that the latter are a tribe of the Huns, which appear

'* The moſt wonderful parts of the ancient ſtory are, the myſterious commerce of the Amazons with their temporary huſbands, the Gargarenſes; their mode of diſpoſing of their male children; and the amputation performed on the breaſts of the females, which laſt circumſtance was probably invented by the Greek etymologiſts in order to explain the name of the nation. Perhaps it might not be more abſurd to derive that name from the Circaſſian word Maza, the moon, which is reported to have been the favourite deity of the mountaineers of Caucaſus, than from the Greek word Μαζὸς, which ſignifies a woman's breaſt; but this muſt reſt for the deciſion of etymologiſts.'

to be a numerous and distinct race. M. de Guignes confounds the Huns with the Turks, and with the ancestors of the present Moguls; but this opinion is only in part true. They were seemingly the origin of the Calmucks, and of the Moguls; but Ammianus Marcellinus, and the Chinese historians, as our author justly remarks, give but a confused and uncertain testimony. The Laplanders and the Samoiedes have a nearer connection; but probably only a similarity arising from climate.

'The Samoyede nation is strangely dispersed: some of them are found in small and detached bodies among the mountains which lie to the westward of lake Baikal; others are supposed to be within the Chinese frontiers; others are scattered among the deserts which extend along the frozen ocean; and some nearly as far to the westward as Archangel. It should seem, therefore, that they must have been formerly a very numerous and powerful nation. They have no longer the use of horses, because the climate of their present country renders their subsistence impossible; but they have still preserved the manners of a pastoral people, and retain the use of moveable habitations, with which they wander from place to place. They neither have, nor appear to have ever had, any kind of regular government; their traditional songs mentions only certain heroes, who, in better times, led their ancestors to battle. These songs form their principal amusement; but the exploits they celebrate are never likely to be renewed. Whether it be owing to the septic qualities of their food, to the natural effects of excessive cold, or to those poisonous fogs which render some part of their country quite uninhabitable, the nerves of the Samoyedes are so irritable, that a sudden and unexpected noise will frequently throw them into convulsions. Of this professor Pallas relates some remarkable instances.

'The Samoyedes have a large head; a flat face; high cheek bones; small eyes; a flat nose; a wide mouth; a yellow complexion; large ears; straight, harsh, black hair; a short thick neck; broad shoulders; and short and thin legs.'

The account of Imaretia and Georgia is curious; but affords nothing that we can with any advantage transcribe, and the memoir concludes with short specimens of the various Caucasian dialects. The Crimea, though not included within the limits of our author's plan, shares a little of his attention. The events of the present war may probably change, in a considerable degree, the condition of the wretched inhabitants of this fertile district. It is painful to see a country which enjoys the bounties of heaven, sunk in misery and oppression by the worst of despotism, an irregular tyrannical government and a turbulent aristocracy.

*Tranſactions of the Society inſtituted at London for Encouragement of Arts, Manufactures, and Commerce; with the Premiums offered in the Year* 1788. *Vol. VI.* 8*vo.* 4*s.* Cadell.

THOUGH this volume of the Society's Tranſactions is not adorned with a frontiſpiece, as uſual, yet the number of its plates, and the importance of its information in other reſpects, render it equally valuable with thoſe which preceded. The firſt part is agriculture; and it is particularly pleaſing to obſerve that, from the earl of Fife's very ſpirited and judicious plantations, the hills and plains of Bamff are likely to be covered with a verdant foliage. While the patriot looks at this country as the cradle of future navies, the natural hiſtorian only reflects that theſe hills are going to reſume their former appearances before deſolation and inteſtine warfare equally contributed, by neglect or deſign, to diminiſh the number of theſe ſtately ornaments. Mr. White and Mr. Lloyd have, in England, laboured in the ſame uſeful line, and have deſerved the Society's notice. Mr. Dudley has been equally ſerviceable to himſelf and country, in keeping at bay the German ocean, that occaſionally overflowed thoſe lands which it perhaps once covered.

Profeſſor Roſs continues to give information about the turnip-rooted cabbage. It ſeems now to be a general opinion, that ſowing them by broad-caſt is preferable to raiſing in a ſeed-bed, and tranſplanting them. Mr. Boote, of Atherſtone, has contributed to eſtabliſh the drill huſbandry in general, and its preference to broad-caſt. His experiments were made on a large ſcale, and are equally ſtriking and important. It is not one of the leaſt of its advantages, that by the neceſſary employment of the hoe, the ground is kept clean from weeds. Even turnips may, he thinks, be ſown by the drill, with theſe advantages, that they may be weeded by women and children, and are leſs infeſted by the fly. The drill huſbandry gains ground, we perceive, in very many counties.

The Chineſe hemp, by accident, bore a few ſeeds, under the care of Dr. Hinton, and they vegetated with vigour the following ſeaſon. It is probable, therefore, that this artful people did not deſtroy the vegetating power of the ſeeds, as has been ſuſpected; but that the failure was owing to the ſeeds having been too long kept. Hemp ſeed does grow, with tolerable certainty, after the ſecond ſeaſon has elapſed. It proved a productive crop; but the qualities of the hemp are not mentioned. It was ſown in broad-caſt, and tranſplanted; though, in wheat, Dr. Hinton is an advocate for the drill huſbandry.

In chemiſtry, the Society offer very important information; that native barilla is found near Bombay; and as the ſhips from

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that iſland are ſeldom fully laden, it may be brought at a ſmall expence. One hundred parts of this Indian alkali, when refined, contain, on trial, 58.8 of mild dry mineral alkali; 24 water; 17.2 of common ſalt. It injures the colour of flint-glaſs, and this ariſes from its common ſalt, which may perhaps be ſeparated with eaſe, if it be required. For common glaſs it is too dear, and for ſoft ſoap it is unfit; but for hard ſoap, medical purpoſes, and plate glaſs, it is probably well adapted. It is found in a bed of ferrugineous clay.

In the claſs of Polite Arts we only find Mr. Yates' ſurvey of Lancaſter, for which the Society gave him the gold medal. In Manufactures, Mr. Greaves has preſented to the Society ſome paper made from the bark of withins alone, in different circumſtances. It is a promiſing rather than an uſeful performance, in its preſent ſtate; and though Mr. Greaves did not fully comply with the propoſal, the Society gave him the ſilver medal. The Engliſh paper for copper-plates ſeems now to equal, in general, the French paper; and, in ſome reſpects, to excel it. In ſpinning ſilk, M. Nouaille recommends only four or five, at moſt ſix or ſeven cocoons to be reeled together, inſtead of eighteen or twenty, the common number in England. The ſilk is much more valuable than in proportion to the additional labour. The Italian reel is, he thinks, ſuperior to the ſpinning wheel.

The papers on Mechanics depend almoſt wholly on the plates; ſo that we can only mention Mr. Hill's very ingenious and extenſively uſeful machine for meaſuring angles; Mr. Joſeph Ridley's improved tool, for ſetting wheels and pinions in watch-work, and his improved ſector; as well as Mr. Beſant's commodious carriage for conveying wood or heavy materials over ſoft land.

Theſe inventors and improvers have been, with great juſtice, rewarded by the ſociety.

A liſt of the rewards beſtowed by the ſociety; of preſents made to them; of their officers, and the chairmen of the ſeveral committees, follow. The laſt part of the work conſiſts of premiums offered by the Society, in which plantations, particularly of oak, have a conſpicuous place. The larch too, a wood hard and durable, but light, is attended to: though inferior to the oak, it is ſuppoſed that it may be advantageouſly employed in ſome parts of ſhips, eſpecially in their upper works. It is much uſed in the Venetian ſhips. The white poplar is chiefly for mooriſh grounds. The Society keep in view the improvement of the gun harpoon; but, either from the obſtinacy of the harpooners, the defect of the inſtrument, or the gun being an improper way of throwing it, we cannot find that it has been ſucceſsful. The former premiums for objects of real importance

are continued; and we ſhall add our aſſiſtance to their truly humane and judicious deſigns, in propoſing the following premium, by endeavouring to extend its circulation:

'*Method of preparing White Lead which ſhall not be prejudicial.*—To the perſon who ſhall diſcover to the Society, a method of preparing white lead, in a manner that ſhall not be prejudicial to the health either of the workmen employed in making or uſing it, and will anſwer all the purpoſes for which white lead is at preſent uſed; fifty pounds.

'A quantity of the white lead ſo prepared, with an account of the proceſs made uſe of, and certificates that not leſs than one ton has been manufactured in the ſame manner, to be produced to the Society on or before the ſecond Tueſday in November, 1789.

'*Subſtitute for the Baſis of Paint.*—To the perſon who ſhall produce to the Society the beſt ſubſtitute, ſuperior to any hitherto known, for the baſis of paint, equally proper for the purpoſe as the white lead now employed; ſuch ſubſtitute not to be of a noxious quality, and which may be afforded at a price not materially higher than that of white lead; thirty pounds.

'A quantity of the ſubſtitute, not leſs than fifty pounds weight, with an account of the proceſs uſed in preparing it, and certificates that at leaſt five hundred weight has been manufactured, to be produced to the Society on or before the ſecond Tueſday in November, 1789.'

As it is with particular pleaſure that we follow the ſteps of this patriotic Society, we cannot leave this annual volume without our thanks for their active and liberal exertions.

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*Experiments and Obſervations, to inveſtigate, by Chemical Analyſis, the Medicinal Properties of the Mineral Waters of Spa and Aix-la-Chapelle, in Germany; and of the Waters and Boue Baths near St. Amand in French Flanders. By John Aſh, M. D. Small* 8*vo.* 5*s. in Boards.* Robſon and Clarke.

DR. Aſh ſeems to be very well acquainted with his ſubject, and his introduction, on the nature of the different impregnations of water, contains much rational chemiſtry and judicious philoſophy. In one point he differs from us, for he ſuppoſes that no impregnation by art can render a water equally powerful with that which nature affords. His chief reaſon reſpects the acidulous waters; ſince, with our inſtruments, we cannot combine ſo much fixed air with water, as we find in many different mineral ſprings. It may, however, be ſafely queſtioned, whether the medicinal effects do not depend on the air immediately and ſpontaneouſly ſeparable from water, rather than on that which is diſcovered in conſequence

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of the application of active powers. The ſtomach cannot boil water or decompoſe it. What remains in that organ is a very ſmall proportion, for the greater part is ſoon abſorbed, and the acidulous waters, as medicines, ſeem to act on the ſtomach alone. Dr. Aſh too does not, we think, pay ſufficient attention to M. Bertholet's experiments on the dephlogiſticated marine acid; for though he mentions them, yet he more commonly ſpeaks of the change as produced by fixed air. M. Kirwan and M. Haſſenfratz' experiments on hepatic airs are alſo mentioned too ſlightly, for it is pretty certain that they are different airs either united with ſulphur in an aerial ſtate, or holding the ſulphur in ſolution (ſee our laſt Volume, p. 333). In ſome of theſe inſtances we ſtrongly ſuſpect that our author had written his account before he ſaw the experiments which we mention; and, unwilling to change the whole, added the newly diſcovered facts to his former inveſtigations.

Dr. Aſh then proceeds to conſider the waters of Spa, and mentions their different kinds. He very properly remarked the ſources of the ſprings, and perceived that the Pouhon water came from a chain of hills different from thoſe which afforded the others: the former conſiſts of argillaceous, ſchiſtus, and ferrugineous ſlate; the latter of calcareous earths mixed, as uſual, with flinty matters. There is a remarkable fact mentioned by Dr. Aſh, that in the neighbourhood of the Tonnelet the cellars on any approaching change of weather are found to contain much fixed air; and the beſt prognoſtic they have of approaching rain, is the averſion of the cats to be carried into them. The Tonnelet, it will be ſeen, contains the greateſt proportion of fixed air.

The Geronſtere appears to us to contain hepatic fixed air, for this impregnation ſolves all the phenomena which ſeem to have perplexed Dr. Aſh's friends; and we doubt not, if he had ſeen M. Haſſenfratz' experiments before the work was finiſhed, that he would have been convinced of it. Different judicious contrivances are ſuggeſted to preſerve the waters more free from accidental impurities, and to preſerve the fixed air of the Tonnelet to be uſed as a bath. There is ſome reaſon, however, to be apprehenſive of injury from its exhalations. The medical remarks are not numerous. Dr. Aſh ſuggeſts that the different ſpas may be uſeful in hectics, ſcurvy in its various forms, in diſeaſed viſcera, and in calculus. In the firſt, we apprehend that little trial has been made, and that little is not greatly in favour of its waters. We ſhall tranſcribe the reſult of our author's analyſis.

The

| Fountain. | Quantity of Water. | Solid Contents. | Aerated Lime. | Aerated Magnesia. | Aerated Mineral Alkali. | Aerated Iron. | Selenite | Aerated Vegetable fixed Alkali. | Ounce Measures of Gas. |
|---|---|---|---|---|---|---|---|---|---|
| | Ounces. | Gr. | | | | | | | |
| Pouhon | 33 | 16.25 | 2.75 | 9.50 | 2.25 | 1.75 | 1.50 | | 35.75 |
| Geronſtere | 32.75 | 5.50 | 2.50 | — | 1.75 | 0.75 | — | | 24.75 |
| Sauviniere | 32.50 | 3.75 | 1.50 | — | 0.75 | 0.50 | — | 1.00 | 33.50 |
| Groiſbeeck | 32.25 | 5.25 | 1.50 | — | 1.00 | 0.75 | — | 2.00 | 35.50 |
| Tonnelet | 32. | 2.00 | 0.25 | — | 0.75 | 1.00 | | | 40.75 |

The Chevron water, which is often exported inſtead of the Pouhon ſpring, an impoſition too ſeverely reprobated by the phyſicians at Liege, greatly reſembles it, except that it curdles ſoap, a property which it ſeems to owe to its gypſum. The fact alſo will account for the gypſum which Bergman diſcovered in ſome reputed ſpa water. In general, ſoap and milk are not changed by the true Pouhon water.

The next ſubject of enquiry is the Aix-la-Chapelle water, whoſe heat, in different circumſtances, is from 112° to 136° of Fahrenheit. Much is ſaid of hepatic air and ſulphur, which we think a previous attention to the experiments lately mentioned, would have ſuperſeded. The mean, or rather the common heat, is 115°; and from 70.5 cubic inches, 58.5 grains of reſiduum were procured: of aerated lime 14.5; aerated mineral alkali 30.75; ſalited mineral alkali 13.25 grains. The quantity of fixed air ſeems to be nearly the ſame with that of the Geronſtere at Spa: the hepatic air ſeems not to have been meaſured. Our author thinks that theſe waters may be of uſe in impaired digeſtions: as a bath, in relaxing contractions, ſoftening indurations, mitigating ſpaſms, and cleaning the ſkin from eruptions. For cold, ſcorbutic, chronic, rheumatiſms, the waters are particularly adapted.

The Borſet waters near Aix-la Chapelle reſemble them in a great degree, though Dr. Aſh ſuſpects, we know not why, that they are leſs ſtimulating. Their heat is 140°, and they greatly reſemble the Caroline waters. The Borſet water has been ſuppoſed to contain allum; but, on a particular enquiry, this opinion was not ſupported by experiment.

A mineral ſpring within the town of Aix-la-Chapelle appeared to be gaſeous and ferrugineous. There was ſome probability that it contained a little vitriolic acid; and Dr. Aſh remarks, that iron diſſolved in a ſmall proportion of ſpirit of vitriol may render a water uſeful, but that it is much more ſo when the metal is ſuſpended by the aerial acid. This opinion, however, requires ſome farther ſupport.

The

The laſt water examined in this volume is that of St. Amand in French Flanders, to which an account of the boue or mud baths are united. The water ſmells of bitumen, or contains, as our author is willing to ſuppoſe, aſphaltic air. The mud is of an indefinite depth and pretty ſolid: its heat was about 63°, while that of the atmoſphere was 47°. There are two fountains at St. Amand, each at about 75°, but the Buillon contains leſs air and a leſs proportion of ſolid contents than the Eveque d'Arras. From the mud a red coloured liquor, which effervеſced with acids, and reſembled volatile alkali, was drawn off: the reſiduum, on evaporation, was not unlike the mud, and when put on burning coals on the ſpot, ſome ſulphureous or bituminous fumes, for Dr. Aſh is not very explicit, aroſe. Theſe waters are found to contain, beſides their ſeparate air, aerated lime, magneſia and iron, ſelenite, argillaceous and ſiliceous earths: but their proportions are not aſcertained, as there was no proper evaporation to diſcover the quantity of ſolid contents.

We cannot diſmiſs this work, without obſerving that, from many circumſtances, it ſeems to have been written in a hurry. The language is ſometimes inelegant, and the opinions often obſcurely expreſſed. This volume contains many uſeful facts relating to theſe waters; but it contains alſo many things which have little connection with the ſubject, and which are of inconſiderable comparative importance.

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*Sermons and Diſcourſes, on ſeveral Occaſions. By George Skene Keith, M. A.* 8*vo.* 6*s.* Evans *and* Son.

A Specimen of theſe Sermons appeared ſome time ſince; and it was mentioned in our LXIſt volume, p. 151. We then thought Mr. Keith's ſtyle too turgid, and occaſionally too familiar. The ſame faults are ſcattered, but in a leſs degree, over the other diſcourſes; and though the author's youth, and the ſtyle generally employed in the Scottiſh pulpits, may be alledged as ſome excuſe, we muſt ſtill think that he has often carried theſe peculiarities too far. There is, however, a force in his reflections, an ingenuity in his explanations, and frequently a vigour in his language, which deſerves commendation.

The firſt Sermon, on the character of Chriſt, was the ſubject of our former animadverſion, in the ſpecimen. The ſecond is an admirable one on religious enquiry. We ſhall ſelect his own recapitulation of the firſt part.

'On the whole of this branch of my ſubject, I think it is evident, that all free-thinkers are too ſceptical in ſome things, ſeeing they will admit no axioms of reaſoning, but doubt of every truth till it be demonſtrated, and require more evidence than,

than, from the nature of the ſubject, can be obtained; and that they are all too credulous in other things, when they muſt, neceſſarily, admit all the abſurdities conſequent upon rejecting the Chriſtian revelation. I think it alſo appears, that the more learned ſceptics only perplex their underſtandings, by refined and metaphyſical reaſonings; inſtead of ſtudying that ſimplicity which is characteriſtical of truth, inſtead of regarding the plain dictates of common ſenſe, which is always preferable to refined arguments, and inſtead of attending to the firſt dictates of a ſound underſtanding, and a good heart, which are always the beſt as well as the firſt deciſions in all caſes, where the primary articles of religion and morality are examined.—And laſtly, though I would make great allowances for the free-thinker, who honours God on the principles of natural religion, but cannot ſatisfy his mind about the truth of the Chriſtian ſyſtem, I think it is evident, that the daring infidel, whether learned or unlearned, who limits the perfections of God, arraigns his works, and denies his providence, inſtead of diſcovering truth by his arguments, only corrupts the heart by groſs and impious reaſoning.—In ſhort, though they are not all equally weak or criminal, it appears that all infidels more or leſs abuſe their reaſon; and that no ſceptic or free-thinker is a child of wiſdom.'

Mr. Keith next enquires into the motives of free-thinking, independent of the love of truth. The motive that he has hinted at, without expatiating on it in proportion to its frequent occurrence, is, the opportunity which infidelity affords for ſneers and for wit. We have known many 'ſad good Chriſtians' in their heart, become infidels only from indulging their fancied pleaſantry. In this part of the diſcourſe we find a good imitation of Mr. Gibbon's ſtyle, and a proper character of the author, if we look at the religious part of his work only. Having enquired into the grounds of infidelity, Mr. Keith, with equal juſtice, points out thoſe qualifications which are calculated for careful enquiry, and proper as well as juſt deciſion.

The third Sermon is on greatneſs of mind; and a ſober rational enquiry into that ſtate of mind which, riſing above trifles, is adapted for great exertions, and ſublime inveſtigations, is introduced in the following very exceptionable ſtyle of affected ſublimity.

'I envy not Moſes, for his ſacred character, as a prophet, though he was inſpired by the Spirit of God, and proved his commiſſion from heaven by many acts of ſupernatural power. I covet not his fame as a legiſlator, though thoſe who diſbelieve his religion, acknowledge the depth of his policy, and the wiſdom of his laws. I deſire not his glory as the deliverer of his country, though he reſcued the Iſraelites from Egyptian bondage, and placed them under the freeſt of all governments, where the Lord of Hoſts was their king. I ſhould even trem-

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ble to receive that diſtinguiſhed honour, which Moſes alone, of all the human race, enjoyed, the honour of ſpeaking with God face to face, that is, of converſing with the Shechinah, or viſible repreſentation of Jehovah's glory. But were I to envy, were I to deſire, in preference to every other, any one thing which belonged to this illuſtrious prophet, it would be, that elevation of mind, that uncommon greatneſs of ſoul, which appears in the text. Here Moſes is repreſented as ſaying to his Creator, (in the words of the text), 'Yet, now, if thou wilt, forgive their ſin; and if not, blot me, I pray thee, out of thy book which thou haſt written.'

He again, in this Sermon, attacks the free-thinker, whom he ſeems to know well; and, claſſing him with numerous other pretenders to greatneſs of mind, contraſts theſe characters with ſuch as truly deſerve the title. This Sermon is, in many reſpects, a very good one.

The fourth and fifth Sermons are on true and falſe eloquence. The firſt is exemplified in the character of Paul; and what he *might* have ſaid to Felix, 'when he reaſoned of righteouſneſs, temperance, and judgment to come:' the other by what Herod Agrippa, the grandſon of the tetrarch, might have drawn down the vengeance of heaven on himſelf. In the former, which is diſtinguiſhed by turgid deſcription, and occaſionally by an improper familiarity, we are ſurpriſed that the admirable ſpeech which Paul *really* made at Athens, was not the ſubject of the text: in the latter, which is the ſuperior diſcourſe, we find a very well drawn character, with a ſhort abſtract of the life of Herod. The ſubject and the language of Herod's ſpeech are gratuitouſly aſſumed; and, inſtead of falſe eloquence, which the title of the Sermon ſpeaks of, we meet with many traits of true. The epithet is aſſigned to the ſubject, for he is ſuppoſed to ſpeak againſt the Chriſtians; to urge on perſecution, and artfully to hint at himſelf as the deliverer that was to appear.

The ſixth Sermon is on the progreſs of virtue and happineſs; in which Mr. Keith points out particular pleaſures, as reſulting from particular virtues. The reſemblance of virtue in action to the repreſentation of bodies in motion in paintings, is an affected and injudicious one. The ſubject is illuſtrated by the progreſs of the good man, and contraſted, in the following Sermon, by that of the wicked man, either as it reſpects the ſtate of his mind, or his external circumſtances.

The eighth Sermon, 'Be ye wiſe as ſerpents, and harmleſs as doves,' inculcates the union of prudence and innocence, a precept peculiarly adapted to the apoſtles; but, in Mr. Keith's opinion, no leſs neceſſary to more modern Chriſtians, and he very juſtly points out the proper prudence and innocence, from thoſe fictitious virtues which often aſſume their form. In the ſecond part,

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he ſhows the effects of either ſeparated from the other, and the powers of both united.

The ninth Sermon, on Abraham offering up his ſon Iſaac, is unreaſonably amplified, and abounds with the faults which we formerly pointed out. The laſt, on the ſubject of the prodigal ſon and his elder brother, is of a ſimilar kind, though with fewer defects. Mr. Keith can reaſon correctly, and explain with ingenuity; but an oration and a deſcription are the ſtumbling blocks which overturn him.

On the whole, we may remark, that we have read theſe Sermons with much pleaſure, mixed, however, with occaſional diſguſts, from the cauſes which we have explained. We look on Mr. Keith as a luxuriant tree: his abundant foliage ſometimes hides its fruit, and ſometimes exhauſts its powers; but, in maturer age, this exceſs will diſappear; and the tree will unite vigour with increaſed utility.

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*A practical and explanatory Commentary on the Holy Bible. By I. Yonge. 4to. 10s. 6d. ſewed.* Faulder.

IT is Mr. Yonge's purpoſe to give a free Commentary on the Bible, with a view to the general deſign of the Almighty in the creation, that of rendering his creatures inhabitants of heaven, and the means of obviating the misfortunes conſequent to the fall, by the coming of a Redeemer. With this intention, he follows the outline of the Old Teſtament in the various manifeſtations of the divine will to our firſt parents; to Abraham and to Iſaac; to Jacob, in the prophetic viſion at his death; and afterwards to the different prophets. The book of Ruth, our author thinks, was deſigned for the purpoſe of connecting the genealogy of Chriſt, ſince Pharaoh (Pharez) was the grandſon of Judah, in whom the promiſe was continued, and the anceſtor of David. He afterwards goes on to connect the prophecies with the life and actions of Chriſt, as recorded by the Evangeliſts, and their completion in the Acts and the Epiſtles with the perfection of our redemption.

A work of this kind cannot afford much novelty: its chief diſtinction muſt be ingenuity and a perſpicuous ſelection. Of this, however, we can find few inſtances. An inflated diction often deforms the work; and a critical accuracy ſcarcely, in any inſtance, elucidates it. Numerous incidental errors, peculiar to the author, occaſionally occur; and he tranſcribes faulty interpretations with little diſcrimination. As we have marked many paſſages, we ſhall take an inſtance or two as they occur.

'I think we may ſuppoſe, that Cain did not know, in its full extent, the atrociouſneſs of the deed he was about to commit.—Death was a ſtranger upon earth, its ghaſtly form had not yet

been ſeen by man; neither was the ſentence yet gone forth, "Whoſo ſheddeth man's blood, by man ſhall his blood be ſhed." Another reaſon why we may ſuppoſe that Cain did not fully comprehend the nature of the crime of murder, is, that God (who is all juſt) was pleaſed to ſpare his life, and not to put in execution that judgment, which, as I have obſerved, was afterwards denounced: it pleaſed God not only to ſpare his life, but to preſerve it by miracle; he drove him away from the intercourſe of his family: but leſt their vengeance ſhould hereafter follow him, and revenge the death of Abel, God ſet a mark upon Cain, leſt any finding him ſhould ſlay him. What that mark was, we are not informed by the ſacred hiſtorian, therefore it is impoſſible for us to know: but if I may be permitted to conjecture, I ſhould think it was ſome change ſo total, as that he could not be taken for Cain the murderer.—Had a terror on his countenance (as ſome ſuppoſe) been the mark, it would rather have induced people to think he was the murderer, and ſlay him. From theſe circumſtances it appears to me reaſonable to ſuppoſe he was changed to a giant. Perhaps from him ſprang that aſtoniſhing and unaccountable race of men afterwards mentioned. I found my opinion (that he was totally changed) on this, that in the beginning of the next chapter, we find a formal renewal of the account of Adam's race.'

Again: ſpeaking of Peleg, in whoſe days the earth was divided, Mr. Yonge obſerves,

'Whenever the meaning of a name (Peleg) is given us, ſome great event juſtifies the doing it. The time of our earth being ſeparated as it now is, has never been aſcertained, it therefore is moſt probable it happened in thoſe early days, from whence there is no tradition but that of Moſes, who, as I have obſerved, could not write in vain, and expreſsly ſays, that they were ſcattered over the whole earth.—That the earth is divided we know; that we do not know how or when, we alſo know; but we have many good grounds to ſuppoſe it happened, when the Lord deſcended from heaven, to ſee the city and the tower which the children of men builded, and to ſcatter them abroad over the face of the whole earth, that they might never more have it in their power to unite in ſuch a work of preſumption: this could not be more effectually done than by cleaving the earth in ſunder, and dividing the inhabitants the one from the other. This clears up the difficulty of the firſt peopling of America, that part of land that was torn off from the main land: it accounts alſo for Eber's naming his ſon Peleg; for he does not ſay the inhabitants of the earth were divided, but the earth in his days was divided. And if we conſider alſo the names of thoſe chains of mountains that ran along that part of the world, which is called Archipelago, we ſhall find reaſon to be confirmed in this opinion; and alſo it appears to me reaſonable to ſuppoſe, from this

circumſtance, that Peleg was himſelf one of thoſe that was cut off on that piece of land, and became a great nation, and a monument of the power of Almighty God.'

Theſe ſpecimens will probably be ſufficient: we can commend Mr. Yonge's piety and orthodoxy, but we cannot praiſe his ingenuity or his acuteneſs. If we had found more original matter in the work, we might have conſidered it at a greater length; but to examine what has been often written would be only to repeat what has often been before obſerved.

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*Vindiciæ Prieſtleianæ: an Addreſs to the Students of Oxford and Cambridge. By Theophilus Lindſey, A. M.* 8vo. 6s. 6d. Johnſon.

THE Letter from an Undergraduate to Dr. Prieſtley, attributed to Dr. Horne, has called forward Mr. Lindſey in defence of his friend, and has occaſioned this copious and laboured anſwer, addreſſed to the 'virtuous youth' of the two univerſities. We found ourſelves obliged very early to differ from the author of this Addreſs: with all our reſpect for Dr. Prieſtley, we do not think him equal to a 'whole hoſt of his opponents,' and ſuperior to Dr. Horſley. Though, in ſome inſtances Dr. Prieſtley has given ſatisfactory anſwers, he has failed in the general tenour of his argument; nor will the boaſt of victory take away from the ignominy of defeat.

In the general and particular anſwer to the Undergraduate, we cannot follow Mr. Lindſey very cloſely, who certainly does not betray his cauſe by conceſſions. Dr. Prieſtley is right in all his poſitions, and St. Paul is an inconcluſive reaſoner, our Saviour is a mere man, and as a judge of the world in a ſtate of pupilage, forming by education for his office; the Goſpel has been interpolated, and a long liſt of novelties or hereſies of this kind are ſupported and commended. We ſhall leave theſe opinions to reſt on their own foundation, and mention only a few of the incidental circumſtances of this volume.

The author has preſerved ſome information relating to the American religious eſtabliſhments, which are curious. In the eaſtern ſtates, and particularly at Boſton, much is ſaid in favour of the apoſtolic practice of ordaining a clergyman, by the powers of the congregation, which they exerciſed in ordaining Mr. Freeman. But all the virtue of this action is, we think, obliterated by confining his miniſtry to the period only in which he ſhall preach *according to their opinions* of the Holy Scripture. Theſe are the 'harrows of iron' which Mr. Lindſey ſpeaks of in his preface, rendered doubly heavy; for if a power of fixing the preacher's opinions muſt exiſt, it is ſurely better that it ſhould remain with biſhops than an illiterate

congregation. At all events it is ſlavery, by tying down the preacher's opinions to the ſtandard of thoſe of other men. But admit for a moment, that the congregation have declared their opinion, and that it is conſonant to Mr. Freeman's. Mr. Freeman, in this age of free enquiry may change, and his congregation may alter their opinion, and the whole is to be decided by the votes of three-fourths of the members. If this be liberty, we may ſafely leave the 'virtuous youth' to their choice. In Pennſylvania the aſſemblies have been a little more complaiſant to the Engliſh articles, and have admitted both the Apoſtles and the Nicene creeds. This compliance is repreſented as too conceding on their ſide, and too encroaching on that of the Engliſh prelates.

Mr. Lindſey has inſerted Caſtellio's opinions, publiſhed by Wetſtein, and hitherto unnoticed. Caſtellio diſtinguiſhes with great propriety between inſpiration and the opinions of the man. He ſpeaks too of St. Paul's errors, where he reaſons independent of inſpiration. But we ſuſpect there is ſome difference in ſaying that the apoſtle, in any particular paſſage, ſeems to have reaſoned without ſufficient care, and that he is an 'inconcluſive reaſoner.' The latter term affects all his reaſoning, and the infidel may, at any time, take advantage of it, in ſupport of his own cauſe. In ſhort, in this defence, that Dr. Prieſtley is not blameable, becauſe many good men have oppoſed ſome of the apoſtle's opinion s, Mr. Lindſey does not appear to reaſon accurately; but we do not therefore think him, in general, an inconcluſive reaſoner.

The late biſhop Butler is ſaid to be of a gloomy caſt of mind, becauſe he thought that repentance alone was not ſufficient for ſalvation. He reſted alſo on the merits of a Saviour; but we do not in this account think him gloomy, becauſe the doctrine of atonement we conſider as well eſtabliſhed. It is a ſevere deciſion againſt every conſcientious member of the church of England. The fact we believe, becauſe Mr. Lindſey was acquainted with the biſhop: we object only to the reaſon aſſigned.

The progreſs of Socinianiſm is, as uſual, inſiſted on from an authority that we ſhould not queſtion, becauſe it occurs as a fact in a book which we ſtrongly recommended. But the argument is put too ſtrongly. We had occaſion formerly to notice this gradual progreſs of a ſect, and to point out the ſource of the new converts. Since that time we have watched them carefully, but have found few that have been gained from the eſtabliſhment. Thoſe who migrate from one meeting to another, imitating the changeful progreſs of Dr. Prieſtley, are of little account in any view. That Dr. Prieſtley has no fixed

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creed is an objection of great importance, which Mr. Lindſey does not ſatisfactorily obviate; for, if we examine carefully, his followers muſt have either much implicit faith, or a little of his enterpriſing labour. There is one paſſage which we cannot do juſtice to without tranſcribing it.

'This is one proof, among many, of Dr. Horne's citing the ſcriptures without due conſideration. For our Saviour is very far, in this place, from teaching a contrary doctrine to that of Dr. Prieſtley, concerning the thinking part of man, that it is diſtinct from and independent of the body, that he really ſays nothing at all about it. For the words of the original ſhould be rendered, "Fear not them which kill the body, but are not able to kill the life: but rather fear him who is able to deſtroy both body and life in hell."

'If he had looked to ver. 39. "He that findeth his life, ſhall loſe it: and he that loſeth his life for my ſake ſhall find it;" he would have perceived that our Engliſh tranſlators render the ſame word, ψυχη, that is here uſed, not ſoul but life, as it would not have been very intelligible to ſay, he that findeth his ſoul ſhall loſe it. And ſo in conſiſtency it ought to have been rendered here, viz. "Fear not them which kill the body, i. e. the preſent life, Luke xii. 4 5, but are not able to kill the life, i. e. extinguiſh it entirely, kill the future life: but rather fear him, who is able to deſtroy both body and life in hell; i. e. can deſtroy both the preſent and future life." In like manner, Luke xii. 19. 20. ſoul ſhould properly be tranſlated life.'

The original word is undoubtedly uſed for ſoul and life, but that the former is the real meaning muſt be obvious from the earlieſt Greek writers, and that it is ſo here, is no leſs obvious from the contradictory expoſition in our author's tranſlation. There is little doubt but that ψυχη means the ſoul κατ ἐξοχην; but it is alſo applied to its functions, and even to thoſe organs moſt intimately connected with them. The context muſt therefore in general decide. We may allow the ſleep of the ſoul, without thinking it as 'near akin to the having no ſoul at all;' for we muſt admit of a power of conſciouſneſs in the material atoms of an accountable being at the day of judgment, if we embrace Dr. Prieſtley's ſyſtem and this nearly amounts to the allowing of ſo many diſtinct ſouls to the different particles.

This work is on the whole written with great plainneſs, great ſincerity, and perſpicuity; but we think it is an inſufficient anſwer to the Undergraduate; it is not always a ſatisfactory defence of Dr. Prieſtley. Though we do not in many inſtances agree with Mr. Lindſey, we think this volume a very advantageous proof of his learning and abilities

*Wiltſhire, extracted from Domeſday Book: to which is added a Tranſlation of the Original Latin into Engliſh. By Henry Penruddocke Wyndham.* 8*vo.* 6*s.* 6*d. in Boards.* Wilkie.

THIS valuable relic has deſervedly obtained general attention; and Mr. Wyndham has extracted from it what relates to his native county, with the very proper and laudable deſign of aſſiſting ſome future hiſtorian of Wiltſhire. It is greatly to be regretted that we have ſo few county hiſtories, and that thoſe which we poſſeſs are imperfect and often filled with inſignificant trifles. The plan ſuggeſted by Mr. Wyndham is very judicious; and, though expenſive, ſeems to us the only one in which accuracy will be united to expedition and elegance. We can ſpeak of this with more confidence, ſince a county hiſtory has for a long time engaged our attention, though it will probably never be the ſubject of our labours. The only objection we perceive is, that the ſum total of the expence is too low: the terms are high; but as it is an object of importance, we ſhould ſuppoſe that a greater number of ſubſcribers than our author mentions might be procured.

In this tranſlation of the Wiltſhire Domeſday, Mr. Wyndham has explained ſome terms in a new way. The hida and carucata, for inſtance, which have often been conſidered as ſynonymous, he thinks are different meanings. The hida is the value, he ſays, and carucata the meaſurement. There is indeed a ſtriking inſtance in Domeſday, fol. 137. N° 19. to ſhow that hida cannot mean the meaſurement. 'Robertus de Olgi, et Radulfus Baſſet de eo tenet Theiſecote. Pro quatuor Hidis ſe defendebat T. R. E. (tempore Regis Edvardi) *Et modo pro duabus.* Terra eſt 4 Carucatæ.'

The terms of the different kinds of lands, of the different inhabitants, and the various kinds of meaſures, are properly explained. Coliberti, which our author ſuppoſed to be fiſhermen, becauſe he found them generally near the banks of ſome river, he afterwards, on farther examination and more mature reflection, explains by the term of freed-men, diſtinguiſhed in ſome reſpect, which we cannot now aſcertain, from liberi. The value of money Mr. Wyndham thinks, with juſtice, cannot be aſcertained from the price of corn or of cattle. He deduces it from the price of labour, but that muſt undoubtedly be regulated by the value of proviſions. We look on this problem as a very difficult one, and that it cannot be properly anſwered; for we muſt not only look at the price of proviſions, but at the condition, the diet, and the inclinations of the labourers. If we aſcertain the value from all theſe circumſtances, we ſhall ſtill be in error, from the demand which may occaſionally

onally occur for any particular, either of food or labour, beyond the uſual one. The beſt method ſeems to be that of approximating by progreſſion, to aſcertain, for inſtance, the progreſſive value of money, within the period of records, and eſtabliſh a rule to which a correction muſt be afterwards applied, from the greater or leſs progreſs of luxury within a given æra: even then we can only approach to the real value. The difference, in our author's opinion, from the time of Domeſday, is about ſeven and a half, and the Norman pounds, in this record, being equal to three Engliſh pounds, muſt be conſequently multiplied by twenty-two and a half to bring them to the preſent ſtandard. We ſuſpect that this multiplier ſhould be greater.

We ſee many proofs, in this Extract, of the Conqueror's attachment to France, by the lands beſtowed on different biſhops and religious houſes of that kingdom, as well as on his own followers. But particular obſervations on this ſubject would not be very intereſting; ſo that, for thoſe readers who are not acquainted with this venerable record, we ſhall extract a ſhort article, as a ſpecimen of its particular apparent accuracy.

'The biſhop of Coutances holds Draicote, and Roger holds it under him. Alward and Elnod held it for two manors T. R. E. and it was then aſſeſſed at five hides. Here are 2 ploughlands and a half. Four hides wanting 1 yardland, are in demeſne, where are 2 ploughlands and 3 ſervants. Four borderers and 7 cottagers occupy the remaining half of a ploughland. Here are 60 acres of paſture. It was valued at thirty ſhilling; now at 60.'

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*Letters on Greece; being a Sequel to Letters on Egypt. Tranſlated from the French of M. Savary.* 8*vo.* 6*s. in Boards.* Robinſons.

FRANCE has already furniſhed two travellers in this direction. M. Tournefort, whoſe acute attention and philoſophical diſcrimination have enabled him to deſcribe with accuracy what he ſaw, as well as to explore the origin of the cuſtoms of the preſent inhabitants of the Grecian iſlands; and M. Guys, whoſe 'ſentimental hiſtory' is very full and entertaining. M. Savary, on his return from Egypt, viſited theſe iſlands, and purpoſed to give a full account of them, if death had not interrupted him in the middle of his work. He now deſcribes only the iſlands of Rhodes, Caſios, and Crete; the three laſt letters, which were intended for a part of the ſecond volume, are added as a poſtſcript, and relate to Melos and Argentiera.

For thoſe who are pleaſed with M. Savary's exuberance, and the glowing colours with which he decorates the different objects that occur, we need add no panegyric; but we muſt own that

to us, these meretricious ornaments are not well adapted to the style of description; nor should the eastern and western poets be pillaged to form a landscape which is scarcely within the bounds of possible existence. We are pleased while we read, but we must condemn when we reflect; while those who only read for pleasure, may enjoy a delicious banquet. With Tournefort and Guys before him, for we have little doubt of our author's having taken advantage of his predecessors' labours, since so much has been collected from books, he could not have made many great mistakes in point of facts. The colours are his own, often glaringly crowded and unskilfully laid on: yet the work is not wholly descriptive, nor are the descriptions always exaggerated.

After relating the voyage, giving some account of the unskilfulness of the captain, which he truly says accounts for the everlasting voyages of Homer's heroes; the coast of Lycia, on which he was accidentally cast, he arrives at Rhodes; and antiquity is exhausted to give its history. The original inhabitants we know not; but when Phorbas was sent for from Thessaly to kill the serpents, it is pretty clear that the historians meant the Phœnicians who had settled on, perhaps conquered, the island. It was first, says our author, under the sea; and we have often decidedly shown that the water has receded from those coasts. The children of the sun are undoubtedly allegorical; but such was the influence of liberty, which it long preserved; of the laws and the government; that Rhodes was very early a maritime state, abounded in all the luxuries, in all the elegancies of life, gave an asylum to the most skilful artists; and our naval code is still greatly indebted to her for many maritime regulations. At present it is sunk under the weight of despotism, depopulated, uncultivated, miserable.—An island of one hundred and twenty miles in circumference contains scarcely 37,000 inhabitants.

Syme and Standia share a little of our author's transitory attention; but he was for some days at Casos, an island which preserves its liberty in consequence of its natural fortification of rocks. It is truly Grecian; the abode seemingly of simplicity and innocence. The Penelope is still employed at the web, while her Ulysses is at sea. We are sorry that we cannot mention our author's conduct in this island, without marking it, in more than one instance, with the stigma of ingratitude.

Crete, the morality of whose inhabitants was equivocal, but who were distinguished by the early preaching of St. Paul, is the next island visited by our author. It was the cradle of mythology in Greece, and M. Savary has collected its mythological, its political, civil, and military history. It is of more

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conſequence to attend him in his tour round the iſland, where the moſt flattering pencil is employed to deck the country whoſe landſcapes are truly charming. In this new form it is conſequently a paradiſe.

'No ſooner is the month of February paſt, than the earth is adorned with flowers and harveſts. The reſt of the years is almoſt one continued fine day. We never experience, as in France, theſe cruel returns of piercing cold, which, coming ſuddenly after the heats, nip the opening flowers, deſtroy the fruits of the year, and are ſo prejudicial to delicate conſtitutions. The ſky is continually bright and ſerene, and the winds mild and temperate. The glorious luminary of day runs his majeſtic courſe through the azure vault, and ripens the luxurious fruits of the hills and plains. Nor are the nights leſs beautiful: a delicious coolneſs then prevails, and the air, leſs charged with vapours than with us, diſcovers a great number of ſtars to the obſerver. The blue vault of heaven ſparkles with gold, diamonds, and rubies, which ſeem to dart forth brighter fires. Nothing can be more magnificent than this ſpectacle, which the Cretans enjoy for ten months of the year.

'To the charms of ſo delightful a climate, are added other advantages which enhance their value. The iſland of Crete has hardly any marſhes. The waters there are never ſtagnant, but, flowing from the ſummits of the mountains in innumerable ſtreams, form delightful fountains, or ſmall rivers which loſe themſelves in the ſea. The elevation of the ground, whence they take their riſe, cauſes them to have a rapid courſe, and they form neither lakes nor ponds. For this reaſon, inſects cannot depoſit their eggs in them, which would be carried to the ſea; and the inhabitants are not tormented, as in Egypt, with thoſe clouds of gnats that fill the houſes, and of which the ſting is ſo painful. For the ſame reaſon alſo, the air is not loaded with thoſe dangerous vapours which riſe from the marſhes in wet countries.

'The hills, and riſing grounds, are clothed with various ſpecies of thyme, ſavoury, ſerpolet, odoriferous rock-roſes, and a variety of balſamic plants. Myrtles and laurel roſes border the rivulets which meander through the vallies. On every ſide the country preſents you with groves of orange, lemon, and almond trees. The Arabian jeſſamine blooms in the gardens, which in the ſpring are decorated with beds of violets. Vaſt fields are covered with ſaffron; wild dittany, which has a very fragrant ſmell, lines the crevices of the rocks: in a word, the mountains, vallies, and plains, exhale on all ſides aromatic odours, which perfume the air, and render it delicious to reſpire. Clouds, ice, and ſnow, are afflicting objects, which throw a mournful veil over the face of nature; they preſent to the eye gloomy images, and excite in the mind melancholy reflections, and painful feelings in the heart. Nay, not unfrequently, they are injurious to health, and produce a general

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indiſpoſition. But a clear ſky has an effect the very reverſe. The ſight of an unclouded ſun inſpires man with joy. His genial warmth revives him, and infuſes that lively chearfulneſs which ſprings from the conſcious feeling of the happineſs he enjoys. In this ſtate of mind every object acquire new beauty. He contemplates with more pleaſure the luxuriance of the harveſts, and admires with great enthuſiaſm the beauteous tints of the flowers; he finds a double ſweetneſs in their perfumes; and, delighted with his own exiſtence, ſeems to communicate to every thing around him the happineſs he enjoys. The youth begins to be animated with a new life, and feels himſelf ſoftly attracted towards another ſelf; his heart palpitates with inquietude and delight, and the tender paſſion of love fires all his ſenſes. While the aged man, now ſafe in the harbour, recollects the tumultuous ſtruggles of his younger days, and, feeling himſelf revived by a ſudden warmth, would be ready to encounter them anew, did not prudence and nature ſoon calm the temporary effervescence of his paſſions.'

In every ſtep our author conſults Strabo, and with an accuracy of reſearch which is characteriſtic rather of the antiquary than of the traveller, the offſpring of the lamp inſtead of obſervation, examines the ancient ſituations and ancient names. The labyrinth of Gortyna is not that of Dædalus at Cnoſſus; it is a natural cavity enlarged by labour, and rendered devious by ſuſpicion. M. Savary ſuppoſes it to have been the retreat of Taurus, an outlaw, who was the executioner of Minos, ſince his ſavage ferocity led him to murder thoſe who fell into his hands. In this way he explains the fable of the *mino-taur*, and is ſupported by Palæphatus in the ſolution. Our author viſited its receſſes by the help of a clue, like Theſeus of old; but his illuſtration of it, in a plate from an ancient gem, is juſt as ſatisfactory as the picture of a modern palace would be to an antiquary who wanted to explore the rude ſtructure of a Druids temple.

The number of inhabitants of Crete do not at preſent exceed 350,000, while it formerly held more than a million. Slavery, our author obſerves, is the cauſe of its depopulation. M. Savary was an enthuſiaſt in the cauſe of liberty: yet it may be obſerved, that the deſpot of Conſtantinople holds the reins with an eaſy hand. The curb is felt with little ſeverity; but M. Savary never forgets to point out the ruinous effects of ſlavery. The deſcription of the amphitheatre on the continent of Lycia muſt not remain unnoticed among the few novelties of this volume.

The merit of the tranſlation we can aſcertain but imperfectly, as we have but a few extracts to compare with the Engliſh verſion. If we can judge from theſe, we may pronounce it

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not only in general correct, but ſpirited, with a proper and minute attention to the idioms of the different languages. In the convent of Acrotiri, however, the deſcriptions are not very exact: the old lady is not deſcribed with ſpirit; but this we could have excuſed, if he had not mutilated the beauties of the lady of thirty-ſix, a time of life when an addition is often requiſite.—'Her neck terminated nobly in the moſt beautiful ſhoulders, and with her head completed a majeſtic form. Her air was full of dignity.'—Let a lady of thirty-ſix, poſſeſſed of theſe accompliſhments, ſay if ſhe would chooſe they ſhould be overlooked? The young lady too is deprived of ſome of her charms. 'The freſhneſs of youth beamed on her countenance:—a chin gracefully rounded terminated the oval of her charming face; modeſty had covered the whole with a doubled veil, and had hid part of her charms.' Theſe accompliſhments the young lady may, perhaps, wiſh the world to be informed of, as M. Savary choſe to record them. We may add alſo, that the firſt, ſecond, and third lines of p. 367. are not very accurately rendered, and in ſome inſtances the manner is not well preſerved; 'which my powers of deſcription are inſufficient to convey,' ſays the tranſlator: but M. Savary with more enthuſiaſm exclaims, 'my pencil falls at her feet, and my colours loſe their brilliancy before her divine form.' We are not at this time appreciating excellence, but accuracy. In general, however, our tranſlator is not only accurate, but happy in his verſion, ſo far as we have been able to compare it with the original.

The three concluding letters are of little importance; and, with numerous faults, this volume is often ſo pleaſing, as to induce us to regret the premature death of the author.

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*A Series of Letters. Addreſſed to Sir William Fordyce, M. D. F. R. S. 2 Vols. 8vo. 12s. in Boards.* Payne *and* Son.

IT has been ſaid of Raleigh that he burned his hiſtory becauſe an account of a tranſaction was given by a perſon who ſtood near the ſcene, eſſentially different from that which he himſelf gave, who ſtood at a neighbouring window; juſtly thinking that if two faithful relators were ſo inconſiſtent, more diſtant reporters would have but a ſlight claim to our belief. M. Luſignan, author of the Hiſtory of Ali Bey, which we noticed in our LVth volume, p. 278. and again in our review of Volney, vol. LXIV. p. 279. has brought the anecdote of Raleigh to our recollection. Our readers will remember, that the laſt author contradicted in very ſtrong terms the relation of the former; and he in turn retorts on M. Volney, accuſing

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him of designed misrepresentation, and of describing countries which he never saw: in reality, he pretty plainly insinuates, that these celebrated travels were written in a garret in London.

This attack is surprising and unaccountable. Let us for a moment suppose M. Volney to be the impostor M. Lusignan describes. It is not probable that he would have opposed so pointedly a narrative, evidently written by a man acquainted with the subject, who was at the same time in London, without indisputable authority; nor would a man of the slightest prudence have done it on any authority, if, as was also probable, it would have drawn a critical and scrutinizing eye to examine minutely the rest of his work. M. Volney must, therefore, have seen the scenes which he describes, or must have copied them from an eye-witness, since he has by this means so boldly challenged criticism, and since his angry opponent has been able to point out few errors except in the history, which is the object of his introduction. If he has copied them from a faithful witness, the world suffers little by the change of persons, though his own character must be injured: but, independent of the assertions of his antagonist, there is no ground to suspect him of a deception of this kind. The learned men of every nation have considered him as a judicious and well-informed traveller; and Michaelis, who immediately detected Savary in his copying the history of Abulfeda, tells us that we may rely on Volney. If he is an impostor, he must possess more knowlege than Psalmanazar, more genius than Chatterton, and more art than De Foe.

In the midst of the contradictory assertions relating to Ali Bey, we cannot discover any ray to guide us. M. Lusignan speaks much from his own knowlege; Volney speaks from apparently good information. We must wait, therefore, for farther elucidation from those who, on the spot, can decide with more certainty. In the author before us we perceive much captious cavilling. When he speaks, for instance, of Ali Bey's dagger, which M. Volney had said was valued at upwards of nine thousand pounds sterling, he assures us that one of his most valuable daggers and a girdle were not worth above ten thousand. We might in return ask what was the value of the girdle; and who, in these different instances, were the appraisers of the dagger? We shall, however, leave these trifling discussions, and examine the letters of our author to Sir William Fordyce.

After the account of M. Lusignan's former travels, and the answer to M. Volney, he adds the Letters to Sir William Fordyce, which form the greater part of the first and second volume,

lume. In this journey our author proceeds by ſea to Conſtantinople, and from thence north-weſt to Adrianople, Sophia or as it is called in ſome maps, Scopia, Nyſia or Nyſſa, Peterwaraden, Peſt or Buda, Vienna, Ratiſbon, Warsburg, Cologn, and Bruſſels. In his route we ſhall not follow him, for we find the narrative equally dry and unintereſting. There are foreſts, corn-fields, towns with good or bad walls, bridges with a different number of arches, and cottages generally wretched. If there is what we have not heard of before, it is of the tranſitory kind, and uſually of little importance. Almoſt the only little circumſtance which relates to the inhabitants we ſhall ſelect.

'The Bulgarians are the moſt induſtrious people in this part of the world; in the cultivation of their lands they are indefatigable, and train up their girls in the ſame laborious occupations as themſelves. In my way from Philippopolis, I met ſeveral companies of theſe girls, from about twenty to forty in each company, going from Sophia to the above place and Baſargic, conducted by an overſeer, to whom they were hired, in order to reap the corn of thoſe countries. Their dreſs is a long linen robe, hanging down to the feet; the ſleeves and breaſt of which are embroidered; over this they wear a looſe worſted gown, or doublet, with half ſleeves reaching below the knees, and tied round the waiſt with a girdle. Their hair is plaited in ſeveral plaits, interwoven with worſted of the ſame colour, and hangs over their ſhoulders and down their backs. Some of them wear caps ornamented with ſmall ſilver medals, and ſome of them go bareheaded. Though they go to ſo great a diſtance from their own homes, yet they never fear any inſult from the men, who might be tempted often to injure them, from the beauty and ſimplicity they poſſeſs, were not the laws ſo ſevere as to puniſh any ſuch outrage with immediate death, whether committed by Chriſtian or Turk. When they arrive at the fields, the corn of which they are hired to reap, the lady of the manor provides for them victuals, drink, and other neceſſary things. The reaping over, they are treated with a ſumptuous feaſt, which being done, they accompany the lady to her own houſe with ſongs and dances, after having preſented her with garlands of different flowers. This ceremony being over, the lady makes each of them a ſmall preſent, and the overſeer having paid them, conducts them back again to the place at which he hired them.'

M. Luſignan thinks that a trade may be very advantageouſly carried on with Adrianople, as the Britiſh merchants are in poſſeſſion of many very valuable privileges. A treaty of commerce between England and the Porte, in the time of queen Anne, is alſo tranſlated, which we hope will not be forgotten. We ſhall ſelect our author's deſcription of the floating bridges over the Rhine.

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'At this place (Ober Wezel) we ſaw one of the floating bridges, made uſe of by the inhabitants of ſeveral of the towns on the banks of the Rhine, for the purpoſe of croſſing that river. The conſtruction of them, which is very ingenious, and much admired by all that ſee them, is as follows: two veſſels, of about thirty tons burthen each, are joined together, over which is placed a floor of planks, railed all round, except two places, one on each ſide, which are left open for the paſſengers, their goods and carriages, to come on and go off. At the head of theſe two veſſels is an arch made of wood, about fifteen feet high, handſomely engraved and painted; to the top of this is attached a rope, which is confined to three boats, or ſmall lighters, higher up in the middle of the river, placed one after another at the diſtance of twelve yards each, the neareſt of which is about eighty yards from the bridge: the firſt of theſe boats is faſt anchored, and to the head of it is tied the rope coming from the arch over the bridge; in the ſecond boat is a kind of maſt, on the top of which the rope is again confined, and then deſcends to the ſtern of the third boat, to which it is tied cloſe. By this contrivance the motion of the bridge is regulated, and it is prevented from being carried down the river by the rapidity of the ſtream, in order to conduct it from one ſide to the other; the maſters make uſe of no other inſtrument than the rudders of the two veſſels, by which means it approaches each bank, which is exactly level with the entrance of the bridge.'

This deſcription, by a little attention, may be underſtood; but it leads us to remark that, in many places, our author is almoſt unintelligible. One inſtance we ſhall extract.

'The Greeks of this town (Tenedos) by an early ſubmiſſion to the Sultan Bajazet, obtained from him certain privileges: namely, an immunity from all tributes and taxes; together with being made of equal rank with his Janiſaries in the defence of their town. Having, however, a few years ſince, ſome diſpute concerning them with the Porte, they ſent them by their governor to the Grand Seignor, by which means they loſt them entirely; but they ſtill live in the enjoyment of them.'

Our author next gives a deſcription of the wonders of the Holy Land: Much of this may be found in Haſſelquiſt; and each abounds with various inſtances of ſuperſtition and deceit, in the ſource of the trueſt and moſt unaffected religion. We were unable to account for this incongruity till we perceived, in a ſubſequent article, the hiſtory of the patriarchs of the Holy See of Jeruſalem. It is obvious from that relation, which we think extremely juſt and truly valuable, that the holy city, for a time, ſubſiſted on its rarities, and was gradually enriched by the ſpectacle which it afforded: of courſe the firſt biſhops fixed the ſpot of every tranſaction of our Saviour's life,

and

and ſhowed buildings which could not then have exiſted, and muſt long before this time have ſunk in ruins.

M. Luſignan's picture, though unintereſting in general, may be faithful; but a gloomy humour ſeems to have guided his pen. He ſaw little to praiſe, or was unwilling to commend; for if he ſteps beyond facts, it is to blame what he ſaw, or to condemn the conduct of thoſe whom he met with. We cannot recommend theſe volumes as generally pleaſing or intereſting. The author ſeems to have received ſome undeſerved treatment: we wiſh him a better fate or more ſteady equanimity.

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# FOREIGN LITERARY INTELLIGENCE.

*(Continued, from p. 335.)*

WE muſt now return to a former, perhaps a favourite ſubject; but the novelties are accumulated ſo much, that it can be no longer delayed: we need ſcarcely ſay, that we allude to chemiſtry. Anaximenes and Diogenes formerly contended that air was the firſt and original principle from which every thing was derived, and of which every thing was compounded. This opinion the modern and beſt informed philoſophers had almoſt followed, till Dr. Prieſtley ſhowed, that, inſtead of water being formed of air, air was really formed from water: this was nearly Ariſtotle's opinion, and explained (theoretically indeed) in the ſecond chapter of the ſecond book of the treatiſe De Generatione et Corruptione. But perhaps we do not want ſo long an introduction to apologiſe for our commencing this account with ſome farther diſcoveries on air.

The animal air was diſcovered by M. Metherie, and mentioned in the ſecond edition of his treatiſe on pure air: we ſhall give a ſhort deſcription of it from that work, when we have introduced it by an account of its contents in general. He ſpeaks of twenty-three different kinds of air, ſix of which may be retained by water; pure, phlogiſticated, inflammable, nitrous, nitrous with an exceſs of pure air, and atmoſpheric air: ſixteen capable of being abſorbed by water, with greater or leſs readineſs; fixed air, ſulphureous acid air; hepatic air; the ſmoaking liquor of Boyle, or ſulphureous acid; ammoniacal, inflammable air; phoſphoric acid air; phoſphoric, inflammable, acid air; phoſphoric acid, inflammable, ammoniacal air; nitrous acid air; marine acid air; marine acid air, with an exceſs of pure air; fluor acid air; vegetable acid air, of different kinds, as procured from different vegetables; animal acid air; alkaline or ammoniacal air; putrid vegetable air; putrid animal air; and the animal air which we purpoſe to deſcribe as a new diſcovery. It is taken from the air-bladder of a carp, and received in an eudiometer over lime-water. Two hundred parts of it were reduced to 1.36; 1.10.

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The lime was very ſlightly precipitated, and only where it touched the air, while 1.40 of common air, with 0.60 of fixed air, produced a copious precipitation. Nitrous air, long expoſed to mercury, with moiſtened filings of ſteel, is greatly diminiſhed, and ſome volatile alkali is produced. This air greatly reſembles the air from the bladder of a carp: it is copiouſly abſorbed, and the water is very ſlightly turbid. It is certainly not alkaline air, as it forms no cloud when the tube is moiſtened with marine acid. We hope this ſubject will be ſtill farther elucidated.

The air contained in bamboos has been the ſubject of M. Hubert's reſearches; but they afford nothing very ſatisfactory. A candle was extinguiſhed in the hollow of one of theſe canes, while a ſmall mouſe ſeemed to feel little or no inconvenience. It is an elaſtic fluid ſeparated, ſpontaneouſly, from the vegetable; and, in our author's opinion, is fixed air, ſlightly mephitic. The upper ſides of the diviſion of the joints of a bamboo are concave; the lower convex, as if preſſed down by the weight of the air, or more correctly by its occaſional expanſion. Is this vegetable one of the means employed by nature to drain off the noxious air of the marſhy grounds, in which it is generally found?

The fire-works which have afforded ſo much entertainment in London are certainly produced by an inflammable air, formed by means of æther. The ſmell is a ſufficient proof; but the method of employing it has not yet been diſcovered but by M. Diller, excepr perhaps by M. Henry, and two brothers, Meſſ. Dumoriers. As we formerly mentioned this ingenious diſcovery, we ſhall add what we have learned of the proceſs, which we have reaſon to think will be ſucceſsful. The inſtrument conſiſts of a bladder, armed with a cock, at the extremity of which is a box of copper, that holds a ſponge moiſtened with a few drops of æther. To this box is affixed a cock, or a tube with a valve: on preſſing the bladder, the air is forced through the ſponge, and eſcapes through the holes at the extremity of the tube. If a lighted candle is placed near the ſtream of air, it takes fire in all the directions which the apertures afford.

The fluor acid we have been accuſtomed to ſee in the form of air; but it may be procured in that of a fluid, and has lately been employed in a way that may render it a very important object in the hiſtory of the polite and elegant arts; we mean, to engrave on glaſs, in conſequence of its property of diſſolving ſiliceous earth. But let us attend to the very intereſting memoir of the younger M. de Puymaurin. It is not eaſy to procure the fluor ſpar quite pure; for it always contains a little ſiliceous earth, which Scheele overlooked, becauſe he employed the pureſt ſpar, and in ſmall quantities. The opponents of Scheele diſcovered this earth, and conſidered it as of a peculiar kind, which gave the ſulphureous acid the properties by which it has been diſtinguiſhed as the acid of ſpar. To obtain it, in the pureſt

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ſtate, it muſt be diſtilled in a veſſel of lead and tin, and the receiver covered with a layer of wax. It ſtill contains a little metal, which the ſulphureous acid firſt diſſolves, and renders it ſoluble in the fluoric, but this may be precipitated by volatile alkali. This pure acid M. de Puymaurin has employed in various experiments. In one experiment, it ſeemed to diſſolve or to divide the diamond; but in ſubſequent ones had no effect. Different ſtones it attacks with different forces: though poſſeſſing a ſtrong affinity to flint, it diſſolves the flint better when divided by the mixture of other bodies. Its action on glaſs ſuggeſted the employing it as a means of engraving on this ſubſtance. Our author uſes it as the engravers of copper employ aqua fortis. Inſtead of wax he employs the ſtrong varniſh of the engravers, compoſed of drying oil and maſtic in tears, and this is ſpread with much care over the glaſs; the figures are traced on it, and the acid applied. In ſummer, eight hours are ſufficient for its action; but in winter it requires ſome days, and the aſſiſtance often of artificial heat. The glaſs is afterwards cleaned, and the operation is finiſhed. Much caution is required in the choice of glaſs, and in laying on the varniſh; in both reſpects the proceſs may be greatly improved. Our author ſeems to have carried it to no little degree of excellence; and his picture of chemiſtry and genius weeping over the tomb of Scheele, ſhow the elegance of his taſte in the choice of a ſubject, and the execution is ſaid to diſplay his merit no leſs as the artiſt.

To M. Bertholet we owe a diſcovery, probably depending on air at once recovering its elaſticity, which is dreadful even in the relation. It is a fulminating calx of ſilver, which requires only to be touched by a cold body even under water, to explode with a force ſuperior to gun-powder, or fulminating gold. Cupelled ſilver muſt be diſſolved in dephlogiſticated nitrous acid, precipitated by lime-water, and the precipitate left to dry three days in the air. M. Bertholet thinks that the preſence of light may have ſome influence. This dry powder muſt then be added to the cauſtic volatile alkali, when it will aſſume a black colour, and it muſt be again dried, to become the formidable power which we have mentioned. It muſt be dried in a metallic capſule, in which it muſt remain: if moved, it is loſt in the moſt dreadful exploſion. A grain of it reduced a little capſule of glaſs to powder, and its fragments were driven through many folds of paper: a ſmall quantity, a few atoms, were blown away by the wind, and the ſmalleſt particle that touched the hand fulminated, and exploded the reſt, which fell on the ground: a drop of water falling on the powder will produce an exploſion. It muſt be made with the face covered with a ſtrong maſk, and the eyes guarded by plates of ſtrong glaſs. Even the alkali employed, if boiled to aſſiſt the combination, will depoſit ſome little powder on the ſides of the veſſel; and this powder, touched under the water, will explode ſo as to burſt the veſſel, throw the water up to the cieling, and divide the glaſs into the ſmalleſt

parts. The theory of this deſtructive powder is imperfect, for it depends on that of the compoſition of water: we ſhall ſoon have an opportunity of glancing at it.

M. Barca's obſervations on the decompoſition of the phlogiſticated alkali deſerve alſo to be recorded: the proceſs by which he originally formed it is new, and may deſerve attention. He mixed equal parts of Pruſſian blue and a ſtrong ſolution of alkali. The paſte was ſuffered to dry about twelve hours; then diluted with two parts of diſtilled water, and immediately filtered. The liquor was coloured, and had ſtill ſome ſigns of alkaleſcence; but poured into a ſolution of vitriol, a dark precipitate was formed, which ſoon became blue, particularly on the lower part, whoſe hue was different from that which was above. Part of this liquor was ſubſtituted for the alkaline lixivium, in a repetition of the experiment; and it then gave no ſigns of alkaleſcence. It was of a yellow green, and precipitated a beautiful blue powder from the ſolution of vitriol. With diſtilled vinegar there was very little precipitation of the blue powder: that which occurs in the phlogiſticated alkali, made in the uſual manner, depends on its having diſſolved a little of the blue, from whence it acquires its greeniſh yellow colour. This led our author to examine the ſolution, and he found that, by expoſing the fluids to the light of the ſun, the blue was precipitated; and by adding a little acid, and repeating the experiment, the phlogiſticated alkali was entirely decompoſed.

M. Woulfe has taught us a leſſon of no little importance in his account of a manner of preparing Pruſſian blue as a proof of iron, which is not affected by acids. Digeſt, ſays he, fourteen ounces of Pruſſian blue and of pot-aſh in a ſufficient quantity of water, and filtre the fluid: digeſt what remains with two ounces of pot-aſh, in a ſufficient quantity of water; filtre the ſolution, and add it to the former. The filtered liquors muſt then be ſaturated with vitriolic acid, ſo as that the acid may be a little in exceſs, which makes the ſolution blue, and ſomewhat turbid. This powder is Pruſſian blue, and muſt be ſeparated by filtration; but the liquor ſtill contains more, which gives it a hue of a greeniſh blue. Some of this muſt be ſeparated by blue vitriol, which precipitates the copper of a chocolate colour; but ſome of it muſt be left, which is to be determined by trying a little of the fluid with more blue vitriol. Water enough muſt then be added to make it of a pale yellow colour. Acids will have no effect on this teſt, becauſe the acid predominates from the beginning. The copper precipitated by the Pruſſian liquor, is, in part, ſoluble in the volatile alkali, and is uſually blue; but, from ſome cauſes, it happens, that it is not ſo. In corn-ſpirit, prepared ſo as to reſemble rum, ſome ſweet ſpirit of nitre is often employed; and in this there is generally a little diſengaged acid, which takes up ſome of the metal from the copper veſſels in which it is diſtilled. In this ſtate, volatile alkali will not diſcover it, even when it will give a ſenſible coat of copper

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to polished steel. The copper precipitated by the Prussian acid is dissolved by fixed alkali. The solution is brown, and is a good test of iron, when it has been previously mixed with an acid.

In the application of chemistry to the arts, we may mention an account received from Italy, though we can support it by no very good authority. It relates to ashes prepared from the salsola altissima, a kind of kali, which, independent of its use in the soap and glass manufactories, is used through the whole of Asia Minor as a dye. The colour which it affords is that of a sky blue, extremely brilliant. The plant grows in Tuscany; but the abbé Sestini, from whom the information *seems* to be derived, thinks that it is rather a species of chenopodium, to which he would give the trivial name of tinctorum.

In another view chemistry has lent her assistance to art, and the abbé Rozier's prize-dissertation on the culture and maceration of hemp is a work of singular importance: we can only offer a transient view of it. The abbé thinks that a crop of hemp is more meliorating than a fallow; that the ground adapted for it is soft and shallow, with a little clay, so as to preserve some moisture. He explains the different methods of maceration in the air by means of frost and of water. On the principles of sound chemistry, our author prefers water, and stagnant or even sea-water. The fibres of the hemp rise from the root to the top; they are matted together, and form different layers, while it is the design of the maceration to destroy this union, and separate the fibres without injuring their force or their elasticity. The substance which unites the fibres is a gum resin, and the solution is effected by a true fermentation: the product is at first fixed, and afterwards inflammable air, with an intolerable fætor; for by the fermentation of the gummy matter an acid is produced which dissolves and volatilises the oil. Acids of every kind, and even the fumes of the volatile sulphureous acid, complete the maceration in a few hours. Lime-water would probably have a very powerful effect; and when hemp is macerated in the air, our author recommends washing it with a weak lixivium, which, besides accelerating the solution, prevents the dust which is so troublesome, and often so hurtful to the lungs, from rising. The odour and infection in the air may perhaps be lessened by agitating the air, putting lime or other substances to absorb the different gasses, or planting aquatic vegetables near it. But the only method of wholly avoiding the bad effects of the odour is, by our author's proposal of burying the hemp in a ditch covered with a foot of earth. If this method is as practicable and as effectual as he represents, it is an extremely valuable improvement.

M. Tessié du Closseau's proposal is of a similar kind. His object is to meliorate sandy soils; and we shall shortly mention his method, though we think it is not easily practicable. He takes a quarter of a bushel of corn, which, according to his measure, weighs about twenty-eight pounds; to this he adds from

one-twenty-fourth to one-twelfth of wood aſhes, with a double quantity of clay, and as much water as will form the whole into a paſte. The grain is mixed with this paſte, and macerated till it begins to germinate; it is then ſown, and by this preparation each grain has a coat of clay to retain the water, and of alkali to meliorate the ſurrounding ſoil. Various other advantages are enumerated, but they are viſionary; and we greatly ſuſpect the utility of the whole, ſince he tells us that, in his trials, the ſtalks were in a much greater proportion than the grain. Perhaps it may be of ſome ſervice alſo to remark, that M. Woulfe informs us how to procure oil from gums. As it is generally prevented from riſing into the receiver by an acid, our author thought of ſeparating the acid by a fixed alkali or lime, and found that by mixing one-fourth of the former with the gum, a pure limpid oil might be drawn off which would paſs through a filtre.

M. Exchaquet's new mode of aſſaying mines of copper and lead is ſpoken of with great applauſe. The employment of nitre is its principal improvement; for it deſtroys the ſulphur without the trouble of roaſting, and reduces the ſemi-metals to calces, which are refractory, at leaſt in the fire employed in the aſſay. We ſhall give a ſhort but more particular account of his proceſs. Take of the galæna with large facets (a rich lead ore) an ounce, add an ounce and a half of nitre, mix them in powder and deflagrate the mixture; keep it in a low red-heat for a few minutes, and reduce it with a flux compoſed of an ounce of crude tartar and a quarter of an ounce of common ſalt. Pound the whole, and put it by ſlow degrees into a crucible, cover it, and keep it in a melting heat for ſeven or eight minutes, when the operation will be complete. The more refractory minerals of lead require three times their weight of nitre; and after the detonation, the fire muſt be augmented; three times the quantity of the reducing flux muſt be added, and the melting heat kept up much longer. Thoſe minerals which contain the gangue (the matrix or containing ſtone) require leſs nitre, but more of the reducing flux. Copper minerals are reduced in the ſame way; but we ſhall deſcribe the method of managing the moſt refractory ones, viz. copper pyrites mixed with much iron. Take a quarter of an ounce of the mineral, and an ounce of the nitre; mix and deflagrate them; the matter will harden, but the heat muſt be increaſed, and it muſt be kept in the red-heat longer than the lead ore. The fire muſt then be farther augmented, till the maſs melts, when a flux, compoſed of half an ounce of tartar, a quarter of an ounce of ſalt, and a little charcoal, muſt be added by ſmall portions. Some ſcoriæ, which contain neither metal nor glaſs, muſt next be added for the iron to act upon, to prevent the deſtruction of the crucible, which muſt then be covered and kept in a pretty violent fire for ſome time, completely to melt the copper which will be found in a maſs at the bottom. The grey antimonial ores of copper, which are almoſt intractable in the common ways, may be treated in the ſame manner. The ſame proceſs may be employed to ſeparate the iron from an ore of cobalt, which has been uſually

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conſidered as almoſt impracticable. We may add, in this place, for we can find none more proper, that M. Miché has been very uſefully employed in improving reverberatory furnaces; but his plans depend ſo much on the plates, that we can give no adequate idea of them without their aſſiſtance. Thoſe who wiſh to conſider them more particularly, will find a ſufficiently minute account in the Journal de Phyſique, tom. xxii. p. 385.

M. Romé de L'Iſle has been equally attentive in his own department, in aſcertaining the different figures of cryſtals and the relation of their forms. The cryſtals of tin (the zinn graupen of the Germans)are capable of being attracted by the magnet, and in this reſpect agree with the octoedral cryſtals of iron. From various experiments, and an examination of the iron in different ſtates, he thinks that it is combined with the matter of heat and only requires phlogiſton for its perfect reduction. It is probable, therefore, that the tin is in a ſimilar ſtate. From the ſhape of the cryſtals, tin, in this form, is often confounded with wolfram and tungſtein; but the former is the octoedron compoſed of iſoſceles triangular planes, while the latter is compounded of the æquilateral triangular ones.

There have been ſome obſervations on ſteel alſo, publiſhed in France, which deſerve attention. Melted ſteel is preferred to that procured by cementation, becauſe its texture and its hardneſs are of courſe more equable. In the melting, however, the flux ſhould be only glaſs: charcoal-duſt renders the ſteel intractable, though a ſmall proportion is not very diſadvantageous. The greateſt proportion admiſſible, is about one-ſixty-fourth; and the glaſs muſt conſiſt only of flint and alkali. It is probable, therefore, that as ſome charcoal may be admitted, that ſteel may be procured from forged iron, with a ſufficient proportion of the duſt for its cementation. There is a remarkable quality of charcoal diſcovered in Germany by M. Lowitz, viz. that when united with putrid fleſh, it deſtroys the fætor, and produces a ſmell of pure volatile alkali. It is not, however, antiſeptic.

In ſome other departments of chemiſtry a few novelties ſtill remain. A mineral ſtyled a cubic quartz has been analyſed by M. Iſleman, and found to conſiſt of calcareous earth, with ſedative ſalt. M. Prouſt has diſcovered a natural phoſphorated lime in large ſtrata in Spain. This ſtone is whitiſh, uniform, and pretty denſe, but not ſufficiently hard to ſtrike fire with ſteel. Its ſtrata are often divided by pure quartz, and they offer the appearance of a net-work of vertical fibres flattened and twiſted. The ſtrata ſometimes incline ſo as to reſemble wedges. This ſtone is phoſphoreſcent, and exactly like the earth of bones, if we could deprive them of their gluten. Our author made but few experiments on this body, ſufficient only to aſcertain its chief principles. It probably contains ſome other earths which contribute to its fuſibility. The ſalt-petre of Spain is very pure and very copious: the vitriol of magneſia (Epſom ſalt) abounds in many parts of the kingdom.

M. Scopoli, in his late analyſis of calculi of the bladder, found the ſaccharine acid, and no lime; but there is ſtrong reaſon to ſuſpect that this acid is derived from the mucilage. M. Brugnatelli found that lime-water was neither the beſt or moſt certain diſſolvent of calculi. The gall-ſtones were found as uſual to be hardened bile: they are ſoluble in ſpirit of wine, and the ſolution, after ſome time, depoſits little ſpungy friable concretions, which are almoſt wholly the oily part.

M. Hermſtadt, from a ſeries of juſt and well conducted experiments, made with a view to enquire whether alcohol exiſted formally in ſaccharine ſubſtances, found it probable that it did not. In every trial, every analyſis, he could not find the leaſt trace of vinous ſpirit. It was, however, highly probable, that ſpirit exiſted virtually, for it contains an oily ſubſtance, water, and probably an acid, which are copiouſly diſcovered in fermentable bodies. His tranſlator thinks he did not ſucceed in finding the alcohol, becauſe he did not add the hydrogen (the inflammable air), which he ſuppoſes, in a proper fermentation, to ariſe from a decompoſition of the water. But we may now be allowed to doubt a little with reſpect to this explanation.

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# MONTHLY CATALOGUE.

## MEDICAL.

*Obſervations on the Brunonian Practice of Phyſic. By George Moſſman, M. D. 8vo. 1s. 6d.* Law.

DR. Moſſman ſeems to be a pupil of the late unfortunate Dr. Brown, and has defended his maſter's ſentiments againſt an author whoſe work we noticed, p. 250. Much looſe theory and many uncertain facts are ſtated: in particular, when the author ſeems willing to ſupport the ſtimulant power of opium, he adduces an experiment where it leſſened the frequency of the pulſe, though it added to its ſtrength and fulneſs: but it is common to aſcertain the ſtimulant power from the effect of any medicine on the number of pulſations in a minute, for the ſtrength and fulneſs are often ſecondary effects. We were, however, moſt attentive to our author's facts. An epidemic occurred at Bradford, which was evidently a typhus, with the moſt confirmed marks of debility: our author has deſcribed it with great accuracy. Only three caſes are mentioned, which ſucceeded, though the fatal tendency of the diſeaſe is much inſiſted on. Stimulants were very freely adminiſtered with bark, and they ſeemed to be of uſe. It is remarkable, that laudanum was only ordered in one; that no attention was paid to the ſtools, for they are only mentioned when they were involuntary; and, though the head was much loaded, a bliſter was only once applied, and in a deſperate ſituation. As Dr. Moſſman has challenged an examination of the Bunonian practice,

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by this publication, we may obſerve, that it does not appear very judicious or enlightened: we may alſo add, that this is not Browniſm in all its purity. It was a favourable epidemic for the trial; for, in moſt other fevers, wine, in the quantity given, would have produced dangerous effects.

*An Eſſay on the Epidemic Diſeaſes of Lying-in Women, of the Years* 1787 *and* 1788. *By John Clarke.* 4*to.* 2*s.* 6*d.* Johnſon.

We have no doubt in conſidering the fever which Mr. Clarke deſcribes to be truly the puerperal fever. It was obviouſly the epidemic of the ſeaſon, modified by the peculiar circumſtances of the parturient ſtate.—It began with great debility, and that very alarming degree of it, inſenſibility: this ſeemed to be the fatal and almoſt the only complaint. The inflammation, as we believe to be always the caſe in the puerperal fever of former authors, was a ſecondary affection, we would not call it a depoſition, becauſe it would imply, that it was occaſioned by the fluids which ſhould have formed the milk. But, as reſpect for every practitioner ſhould induce us not immediately to reject their opinions without examination, we ſhall hazard a propoſal of cautiouſly applying a dry cupping-glaſs to the breaſt in ſimilar ſituations. We truly hazard it, and requeſt thoſe who may read this article to weigh the propoſal maturely before they practiſe it. The milk is uſually gone.

In the fever before us, the inflammation was in different parts of the abdominal viſcera; and always attended with an exudation in greater proportion than the violence of the inflammation ſeemed to warrant. This, which in France would be called a milky depoſition, we rather conſider as a mark of great relaxation.—Of the cauſes, diſtreſs and anxiety of mind ſeem to be alone diſtinguiſhable with preciſion; and theſe are remote cauſes only. The cure is uncertain: emetics, from the pain which they gave, and the irritability of the ſtomach which they left, were injurious. In this fever, an early application of a bliſter to prevent the depoſition, a full doſe of bark and cordials, with ſome opium to determine the ſtimulants to the ſkin, ſeem moſt likely to relieve. Mr. Clarke will excuſe our ſuggeſting any plan, ſince, in the dark, a blind man may be an uſeful guide. Though we have ſeen, in the period referred to, puerperal diſeaſes which ſeemed epidemic, we own, that nothing ſimilar to the diſeaſe deſcribed by our author has occurred to us. He deſerves our thanks for the very excellent account that he has given of it; and he deſerves the thanks of the world, for the very proper manner in which he ſeems to have conducted the cure, though it was not always ſucceſsful. We are convinced, that few methods would have been more ſo.

*A New Experimental Enquiry into the Nature and Qualities of the Cheltenham Water. By A. Fothergill, M. D. F. R. S.* 8*vo.* 2*s.* Baldwin.

We examined the firſt edition of this enquiry in our LXth volume p. 237, and are pleaſed to find that another edition is become neceſſary. The work is now greatly enlarged by obſervations on common water, its various impregnations by nature or art, with the uſes of each in different diſeaſes. The author has drawn from the purer ſtreams of rational chemiſtry, and has not ſullied the cryſtal rill in its paſſage.—But as we find nothing particularly new, indictum alio ore, we ſhall not enlarge on it. We may juſt remark, that he recommends, from Bergman, the ſea-water to be taken from a great depth, when it has not the bitter naufeous taſte. M. Fourcroy's experiments, which we lately mentioned, lead us to believe that on the bitter ſalt much of the virtues of ſea-water depend; and before this advice be followed, it ſhould be enquired, whether with the bitter taſte we do not loſe the ſalutary virtues. In the Appendix Dr. Fothergill treats of the aqua mephitica alkalina, but he adds little to what Dr. Falconer has already ſaid of it.

*Ampthill Medicinal Baths. Addreſs to the Afflicted; containing a Variety of Caſes and Cures, of the Scurvy and other Impurities of the Skin, &c. By R. Dominiceti, M. D.* 8*vo.* 1*s.* Stalker.

A liſt of caſes cured by Dr. Dominiceti's baths, which we have no reaſon or inclination to doubt of, or contradict: we well know the efficacy of warm-bathing, carefully adminiſtered.

## POETRY.

*An Elegy written in a Country Church-yard, by Gray. With a French and a Latin Tranſlation in Verſe.*

*Elégie compoſée dans une Cimetiere de Campagne, traduite en François, Vers pour Vers, de l'Anglois de Gray, par Mr. P. G. D. B. Pariſien.* 8*vo.* 1*s.* Elmſley.

There are many faults in the French verſion; and when we conſider the very difficult taſk of tranſlating the lines of Gray into correſponding lines of French verſe, theſe faults may undoubtedly be forgiven: one or two were, we find, for the ſake of the rhymes. We ſhall tranſcribe the firſt ſtanza, which we think very happily rendered, and one other, which appears to us not only weak but erroneous. It is not, however, one of the moſt faulty.

'Le Son du Couvrefeu dit le départ du jour;
Le troupeau mugiſſant fuit lentement la plaine:
Le laboureur laſſé la quittant a ſon tour,
Laiſſe à la Nuit et moi de ſes champs le domaine.'

Again:

'Combien de fois leur faulx nétoya les guerets!

Combien

Combien leur ſoc ouvrit la terre mutinée;
Que leurs chariots aux champs les rendoient ſatisfaits!
Combien le bois tomboit ſous leur lourde coignée!'

This is the ſtanza which in Engliſh begins, 'Oft did the harveſt to their ſickle yield,' &c. We ſuſpect that *mutinée* can never mean *ſtubborn*; and are pretty certain, that the third line is a very inadequate reading of 'How jocund did they drive their team afield.' It certainly betrays a little too much confidence, to contend with a French matter in his own profeſſion; though, from long habits, French is not much leſs familiar to us than Engliſh. The tranſlator will, however, allow us to obſerve that, except as a trial of ſkill, a work of this kind cannot appear of great importance.

A Latin tranſlation, which we examined in our LXIſt volume, p. 398 *, and which is admirably executed, accompanies the French. An Italian tranſlation we noticed alſo in the volume and page juſt referred to.

*The Methodion: a Poetical Olio. By a young Gentleman.* *Small* 8*vo.* 2*s.* 6*d.* Gardner.

This young gentleman is extremely ſevere upon us in his concluding poem. In the very firſt line he overwhelms us with a redundancy of ſatire:

'O ye wiſe heads, and criticiſing pates!'

The ſecond makes ſome amends, being (we had almoſt ſaid) neither ſatire nor ſenſe:

'Deſpotic judges of poor *infants'* fates!'

Theſe *infants*, however, are metaphorical, and we are deſired to

'Spare poor *me* who never *bred* before!'

He next intreats us to 'ſpare the child,' and then tells us that he ſcorns

'To beg a boon which critics can deny.'

In ſhort, that 'he has aſk'd no favour, and is not afraid of our deciſion.'

We fear our *wiſe heads* will be thought rather fooliſhly employed in examining minutely ſuch a production as the preſent. We ſhall, therefore, give but one ſpecimen, in which the author's modeſty and abilities will appear to equal advantage.

'Spite of myſelf, my character and name,
My ſqueamiſh modeſty and love of fame;
(Whoſe joys none ſlight but thoſe hav'n't known 'em)
I do aſſert that love's that *ſummum bonum*
Which all your grave philoſophers have miſs'd,
Who all are errant blockheads I inſiſt;

* The Latin tranſlation we have ſeen before, and admired; but we are not quite certain that the work referred to is the ſame with that before us, though we have great reaſon to think ſo.

Such

Such dolts and purblind pedants, ſtrike me dumb,
If, all together, they are worth a plumb!
Nay, do not ſtare, nor ſpoil that pretty face,
My little pouter! with a French grimace;
My doctrine's orthodox, I do aſſure you,
And will, if practiſed, fail not to allure you.
Love!—'tis the only bliſs we can enjoy,
The only pleaſure which will never cloy;
Its ſullen dumps are not ſo much amiſs,
And all its racks and tortures—heights of bliſs:
This is that ſweet'ning cordial of life
(But don't miſtake me, I abhor a wife)
Pow'rful each ruder paſſion to aſſuage,
And calm to nothing ev'n a madman's rage;
Without whoſe ſenſual joys, however big,
I'd cheapen worlds, though offer'd for a fig.'

The above is intended as a confutation of Pope's *filly* maxim, that 'virtue alone is happineſs;' and who can controvert ſuch judicious arguments, and ſo reſpectable an authority, ſupported by the experience of ſeventeen years? For though we are told that many of theſe poems were written when the author was but fourteen years old, he aſſures us that he is now ſeventeen complete.

*Lines written at Twickenham. By D. O'Bryen.* 4*to.* 1*s.* Debrett.

The author makes a little more parade than is neceſſary about his having written the poem in *leſs than half a day*; but as his friends requeſted him to publiſh it, ſurely he might have taken a little time; and a poem of 170 lines did not require a great deal to reviſe and poliſh before he ſent it to the preſs, and by that means prevent its 'abounding with the blemiſhes almoſt inſeparable from any thing *ſo* executed.' Some of the lines are not deſtitute of harmony; but a little more attention would certainly not have been amiſs. After the encomiums paid to Mr. Fox for his wonderful eloquence,

—— 'the rich, the rapid tide
That drags e'en vice for once to virtue's ſide.'

For

'The eagle glance that ſhoots through every part,
And ſtrikes the latent vileneſs of the heart.——'

For

'The ſkill that fences liberty from ill,
Both from the crowd's caprice and tyrant's will.——'

For, in ſhort, 'collecting the world's affairs in one view, and guiding the great concerns of human kind.' Muſt not that gentleman conſider the two laſt lines of our following quotation as partaking a little too much of the anticlimax, both in reſpect to compoſition and compliment?

He,

'*He*, who reſiſts, though the whole earth combin'd,
When the big matter ſuits his mighty mind,
In life's low cares is borne by ev'ry tide,
The humbleſt rule him, and a child may guide.'

## NOVELS.

*The Twin Siſters; or, the Effects of Education.* 3 *Vols.* 7*s.* 6*d ſewed.* Hookham.

As theſe adventures are not concluded, and as, at the end of the third volume, we perceive that they are to be continued, we can give no poſitive opinion on them.—So far as we have ſeen, the work is not written by a common hand. There is a novelty in the remarks, and a neatneſs in the language, which ſeems to imply an author out of the uſual line. The character of Granby is well drawn, and correctly ſupported; that of Mira is ſcarcely, if at all, inferior; but the character of Amelia is, in ſome parts, improbable. In general, however, they are well diſcriminated, and the various pathetic ſcenes worked up with peculiar ſkill. To the obſervations and remarks we might find ſome objections; and this lady is not aware of the great heat of a ſolar microſcope, or ſhe would not put a fly there, to teach a gentleman humanity, at the expence of her own. We riſque a little at ſaying ſo much of an unfiniſhed work; but long experience in the circulating library has given us ſome foreſight. It is not difficult to ſee how the ſtory will end: we muſt, however, be ſilent, that we may not anticipate the pleaſure of others, or, what is of more conſequence, induce the lady to change her plan, that ſhe may diſgrace the preſcience of a Reviewer.

*The Ramble of Philo and his Man Sturdy.* 2 *Vols.* 12*mo.* 6*s.* Lane.

We expected much, and were diſappointed. The plan was good, and the characters ſeemed at firſt to be intereſting; but the author's ſtrength ſoon failed, and we found nothing to entertain, or to inſtruct. The characters introduced to Philo are generally unimportant and inſipid; his adventures are very inconſiderable; and, if we except a few traits, ſketched ſeemingly from life, we have ſeen nothing in theſe volumes which would induce us to ſnatch them from the fire.

*Helena; a Novel. By a Lady of Diſtinction.* 12*mo.* 3*s.* Richardſon.

The editor ſpeaks highly of this work; but we cannot follow him in the profuſion of his commendations. It is generally unaffected; ſometimes intereſting; but often dull, and in a few inſtances, a little improbable. We have many reaſons for thinking it not a *profeſſional* work (we allude to the profeſſion of a hackneyed novel-writer); but we cannot commend it very highly, except perhaps for being *founded* in truth.

*The*

*The Male Coquet. A Novel. 2 Vols. By Jane Timbury.* 12*mo.* 5*s. ſewed.* Murray.

The Male Coquet has been the object of ſo much ſatire, ridicule, and ſober animadverſion, that we fear theſe weak inefficient pages will be of no great ſervice in reforming him. As a novel, we can ſay little of this work, but that it is a ſlight ſummer ſilk, eaſily frayed by the touch of criticiſm, and through which we can every moment ſee that the ſcene is fictitious.

*The Pupil of Adverſity; an Oriental Tale. 2 Vols.* 12*mo.* 5*s.* Lane.

This is a fairy tale, an allegorical hiſtory, with ſome political reflections, applicable to the preſent period. Together it affords an olio neither very conſiſtent, intereſting, or pleaſing. The allegory of the Iſland of Metamorphoſes is, however, better conducted than any other; and ſome parts of the Hiſtory of India being preſerved, our beaux and belles have a little chance of learning a few facts of inconſiderable importance.

## MISCELLANEOUS.

*An authentic Detail of Particulars relative to the late Ducheſs of Kingſton.* 8*vo.* 3*s.* 6*d.* Kearſley.

*The Life and Memoirs of Elizabeth Chudleigh, afterwards Mrs. Hervey and Counteſs of Briſtol, commonly called Ducheſs of Kingſton.* 4*to.* 1*s.* 6*d.* Randall.

Theſe two publications differ little from each other: the former is, however, moſt full, and apparently moſt authentic. The latter is almoſt its copy, deficient in ſome parts, and diſtinguiſhed only by a recital of the law-proceedings, from the 'chronicles and brief regiſters of the times.' To deſcribe the ducheſs of Kingſton is ſcarcely in our power; to relate the events of her life, the fruitful theme of every newſpaper, is ſtill more difficult, and, at beſt, improper for our Journal. Gay, lively, elegant, and witty, ſhe lives in the remembrance of thoſe who knew her in her early days, as the empreſs of faſhion, of ſplendor, and of elegance. Her later life was ſtained with weakneſs, with hypocriſy, and avarice. Always unſtable, ſhe was ſatiated even with ſplendor; unremittingly vain, ſhe was the dupe of impoſture; inceſſantly avaricious, ſhe appears the monſter of ingratitude. When her beauty was no longer the captivating veil; when her wit was obſolete, and vanity was no longer gratified by ſacrifices at her ſhrine, her other and leſs amiable qualities were diſcerned; and ſhe is a ſtriking leſſon of how little value the beſt gifts of fortune are, when not properly employed, and how far the bleſſings of heaven may be perverted by miſapplication: for ſhe lived without eſteem, and died without regret. Her will is a ſeries of inconſiſtencies, of vanity, and of abſurdity: we can ſcarcely think, that it was deſigned for any thing but a ſplendid monument of her connections with perſons

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of rank, with royalty, and even with infallibility. Perhaps in ſome inſtances (we know that there are *ſome*) her perſonal qualities, and her wit, ſhould have been diſplayed at a greater length; her charities ſhould have been pointed out, and her occaſional acts of benevolence ſhould have been recorded. Though cenſure may obſcure the motives, the biographer ſhould have recollected, that the facts are undoubted; and how dangerous would be the precedent to deny applauſe, till the motive has paſſed the ordeal of enquiry, and appears as unpolluted as the action is brilliant!

*A Diſſertation on Virgil's Deſcription of the ancient Roman Plough. By A. J. Des Carrieres.* 8*vo.* 1*s.* Gardner.

On the reverſe of an old coin the figure of an inſtrument, which reſembled the plough, occurred. It was evidently Roman, and the figure comes nearer to the inſtrument deſcribed by Virgil than any other form that has been ſuggeſted. It probably is the real plough of the ancient inhabitants of Italy; and it turns up the earth, ſows, and harrows, at the ſame time. Every claſſical agriculturaliſt has found a great difficulty in underſtanding the ancient deſcriptions; and we have lately had occaſion to notice it in our review of Mr. Dickſon's work. Yet M. de Carrieres is a little too ſevere on his predeceſſors, who had no aſſiſtance to guide them. We are ſorry that, in our limits, and without the plate, we can give no proper idea of this ancient and valuable inſtrument.

*Catalogue of Five Hundred celebrated Authors of Great Britain, now living.* 8*vo.* 5*s.* Faulder.

We do not think that the deſign of characteriſing living authors is a happy one; and, in this inſtance, the execution is leſs fortunate than the deſign. Of living authors many circumſtances muſt neceſſarily be known, and of courſe, much muſt be correct; but where our author gives a character of their works, where he takes a ſingle ſtep out of the common path, it is generally an erroneous one; even the names are not always accurate, and the catalogue of works is generally defective. It is not difficult to gueſs at the ſentiments of the author, for they are occaſionally diſplayed often in uncandid criticiſm, and ſometimes in illiberal remarks. We ſhall ſelect one inſtance of his beſt and his worſt manner.

'GREATHEAD, Samuel: ſon of lady Mary Greathead, and nephew to the duke of Ancaſter. Mr. Greathead when in Italy, was a contributor to a collection of pieces in proſe and verſe, ſuperintended by Mrs. Piozzi, and entitled the Florence Miſcellany. He has lately preſented the world with a tragedy, performed at Drury-lane theatre, and intitled the Regent, which has not altogether anſwered the expectations that had been formed of his abilities.'

'PALEY, William: A. M. archdeacon of Carliſle. He publiſhed in 1784 a work, entitled Principles of Moral and Political Philo-

Philoſophy, in one volume quarto; which, though it exhibit few marks of originality, though it be inimical to civil and religious liberty, and though its moral principles be lax, crude, and indigeſted, has experienced a very uncommon and brilliant ſucceſs.'

*An Epitome of the Hiſtory of Europe, from the Reign of Charlemagne, to the Beginning of the Reign of George III. By Sir William O'Dogherty.* 8*vo.* 6*s. in Boards.* Hookham.

Sir William O'Dogherty very properly ſtyles this Epitome a ſeries only of chronological facts: the ſeries is, however, broken and interrupted, by its including ſo many ſeparate, and often independent kingdoms. This has been the error of many modern hiſtorians, and is partly owing to the nature of their ſubject, though they have not been careful to combine even thoſe parts which are very intimately connected. In a few inſtances, our author adds ſome reflections, but they are neither very numerous or profound. This work may, however, be extremely uſeful, not only for the younger ſtudent, but for the purpoſe of referring to facts and dates. We have examined many parts of it, and ſee no reaſon to impeach its accuracy.

*An Account of the Hunting Excurſions of Aſoph ul Dowlah. By William Blane, Eſq.* 8*vo.* 1*s.* Stockdale.

It appears that the nabob of Oude ſets out upon his hunting excurſion annually about the beginning of December, and returns about the beginning of March. His retinue conſiſts of no leſs than twenty thouſand perſons, and is furniſhed with all the conveniences of travelling, and all the delicacies of the table, in the moſt magnificent ſtyle of Aſiatic luxury. He bends his courſe towards the ſkirts of the northern mountains, where the country is moſt proper for game; and generally makes a circuit from four to ſix hundred miles.

*A True and Faithful Account of the Iſland of Veritas.* 8*vo.* 1*s.* Stalker.

This ſtrange iſland is ſituated ſouthward of Boſton, and yet Botany-bay is in the way on returning to New England: the inhabitants, without any connection with other kingdoms, ſpeak Engliſh, and underſtand Latin. A plot of this kind cannot be deſigned to impoſe on the reader, for the artifice is too obvious; and we ſee no good reaſon for introducing it; or if any plot was neceſſary, for its not being brought with more ſkill within the bounds of probability. The political regulations of the pretended Veritaſians are very near to thoſe of our own country, which are therefore, in our author's opinion, not diſtant from perfection. The elective monarchy and the annual parliaments are, we think, no improvements. But the chief object of the author is religion: the Veritaſians are philoſophical Unitarians. A liturgy on theſe principles forms the chief part of the work; and in the ſecond and third diſcourſes annexed, the claims of our Saviour to every diſtinction, but that of a good and enlightened man, are diſcuſſed

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at ſome length, and in the author's opinion overthrown. We need not, at this time, offer any arguments for a contrary ſyſtem; and our author ſurely could not be ſerious, when he requeſted a private confutation of what might appear erroneous.

*A Letter to T. E. Tomlins, Barriſter at Law; containing ſome candid Obſervations on a late Publication of his, entitled, "the Law of Wills and Codicils." By William Muchall.* 8*vo.* 1*s.* Whieldon.

Mr. Muchall differs in one point from Mr. Lovelaſs; in ſeveral from Mr. Tomlins, and from the editors of Newman's Conveyancing. His oppoſition is conducted with candour, and frequently with ſucceſs. But ſuch is the glorious uncertainty of the law, and ſo minute are ſome of our preſent author's diſtinctions, that it is by no means clear that the future deciſions may be in his favour.

*A Sketch of the Life and Paintings of Thomas Gainſborough, Eſq. By Philip Thickneſſe.* 8*vo.* 1*s.* Fores.

This work may be ſtyled a narrative of Mr. Thickneſſe's tranſactions with Mr. Gainſborough. So far they may probably be correct. There is, however, little diſcrimination of Gainſborough's talents, and a very ſhort account of the man. He had undoubtedly genius, and it was diſtinguiſhed by its uſual refinement and delicacy, its common attendants, excentricity and inequality. We hope to receive a much better life of this celebrated painter, if ſome of his former intimate acquaintance can be prevailed on to tranſmit a more finiſhed picture of him to poſterity.

*The Abbey of Kilkhampton. An Improved Edition.* 8*vo.* 2*s.* 6*d.* Kearſley.

We found ſomewhat to commend in the firſt part of this work, which occurs in our Lth vol. p. 253; but the author ſoon loſt his credit, and deſcended to illiberal ſcurrility and mean invective. He received our ſevere reprehenſions, in the ſame volume, p. 445. The preſent work, which contains both parts, omitting only the epitaphs of thoſe who really require monumental diſtinctions, muſt be of unequal merit. In general, it is weak, ill-natured, and contemptible; and, though we may praiſe the deſign, if conducted with propriety and decorum, we cannot too ſeverely reprobate the work before us.

*A Letter to Sir Francis Blake, Bart. wherein his Arguments for the Abolition of Tythes, and the Reform of the Church Revenue, are candidly conſidered, and their Futility expoſed.* 8*vo.* 1*s.* 6*d.* Evans *and* Son.

Some years ſince ſir Francis Blake propoſed a ſcheme for the abolition of tythes, and a reform of the church-revenue. This work is the object of his correſpondent's examination; and he follows it cloſely, with great force of argument and much candour. His remarks do not, however, militate againſt an eſtabliſhed ſtipend, by commutation, or any *ſimilar* method.

*An Apology to the Public, for a continued Intruſion on their Notice; with an Appeal to the free and independent Proprietors of Bank Stock. By William Pickett, Eſq.* 8*vo.* 1*s.* Sewell.

The author of this Appeal points out a variety of inſtances, in which he thinks the charter of the Bank Company has been violated, and which is highly becoming the proprietors to take ſteps to prevent in future. But as to the intimations, inſinuations, and ſuſpicions, of the intereſted conduct of the Directors, or any of them, he pretends not to be able to prove any thing. He thinks it ſtrange, however, that the gentlemen in the direction of the bank have not had long ago a ſpecial court, for the purpoſe of ſatisfying the proprietors with reſpect to the integrity of their conduct.

*Petite Encyclopédie des Jeunes Gens. Avec Figures. Par N. Wanoſtrocht.* 8*vo.* 6*s.* Booſey.

This little ſchool-book is very clear, ſufficiently accurate, and comprehenſive. It deſerves, and will undoubtedly obtain, no inconſiderable encouragement.

*Eſſay on the Conſtruction and Uſe of a Mine-Auger. Tranſlated from the German of Mr. Geiſe. By William James M'Neven, M. D.* 8*vo.* 2*s.* Richardſon.

This inſtrument is not a new one, nor do we find any material improvements on that which is now commonly uſed. Indeed, the only improvement muſt be an acquiſition of force and velocity, by the proper application of the machinery, and a method of managing an auger, if divided into fewer pieces, where of courſe each piece is longer. Some other inſtruments of a ſimilar kind, as a borer for the farmer and well-digger, are deſcribed. Some of the uſes to which the auger may be applied, according to our author, are viſionary.

*A Comprehenſive Grammar of the Engliſh Language, for the Uſe of Youth. By J. Rothwell.* 8*vo.* 3*s.* Cadell.

This Grammar ſeems well adapted to the earlier periods of education; but it deſcends a little too low to be the object of criticiſm, or particular remark.

## CORRESPONDENCE.

Dr. M. complains of us, with reaſon: it muſt undoubtedly have appeared to him that his work has been neglected. We beg leave, however, to aſſure him, that it has been often in our hands, and the delay only owing to our wiſh to examine it with accuracy. Various circumſtances have prevented the completion of this taſk, which Dr. M. muſt know to be tedious and difficult; to require much uninterrupted leiſure, and a well-ſtored library. We hope that our account will not be delayed beyond the next Number.